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<p>A. I. NJOKU</p> <p>Ph.D.</p> <p>2014</p>	<p>EVALUATION OF THE IMPACT OF ADHERENCE TO PROJECT GOVERNANCE PRINCIPLES ON THE OUTCOME OF LARGE INFRASTRUCTURE PROJECTS IMPLEMENTED IN DEVELOPING ECONOMIES WITH NIGERIA AS AN EXAMPLE</p> <p>A. I. NJOKU</p> <p>Ph.D.</p> <p>2014</p>
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EVALUATION OF THE IMPACT OF ADHERENCE TO  
PROJECT GOVERNANCE PRINCIPLES  
ON THE OUTCOME OF LARGE INFRASTRUCTURE PROJECTS  
IMPLEMENTED IN DEVELOPING ECONOMIES  
WITH NIGERIA AS AN EXAMPLE

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Submitted for the degree  
of Doctor of Philosophy

School of Management  
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2014

## ABSTRACT

**Name of Candidate:** Anthony Iroegbu Njoku

**Title of Thesis:** Evaluation of the impact of adherence to project governance principles on the outcome of large infrastructure projects implemented in developing economies with Nigeria as an example

**Keywords:** Project, Infrastructure, governance, management, developing economies and project performance

There is a strong perception that large infrastructure projects (LIPs) implemented in developing economies fail to meet their original estimations and specifications more than those implemented in developed economies. This situation results in weak infrastructural development in developing economies, which, has been associated with the poor industrial development in these countries. A literature review confirms that LIPs implemented in Nigeria failed to meet their original estimations and specifications more frequently than LIP implemented in countries such as UK or USA. The root causes identified in the review were mostly related to lack of project governance. Thus, a study of six LIP cases implemented in Nigeria was carried out. Data was generated from 30 senior management staff; 5 from each LIP; using interviews and questionnaires and a weak positivist philosophy was used in analysing this data. The analysis focused on identifying three factors; the adherence level to PGPs; the adherence to Project Management (PM) common practices; and impact of external factors on LIPs. The analysis shows that in projects with strong governance there was a tendency to use more project management tools and techniques and they performed better in meeting the original estimations of time, cost and performance against specification. The analysis also indicates that political, economic, socio-cultural and technological (PEST) factors have adverse effect on adherence to PGPs in Nigeria.

This indicates that adhering to PGPs can help in improving the outcome of LIPs implemented in Nigeria, if PEST factors are controlled.

## **ACKNOWLEDGEMENT**

I wish to use this opportunity to thank those people without whom this thesis would not have been possible. First and foremost I wish to thank God for giving me the hope and strength to pull through the challenging times during this study. Secondly I wish to thank my parents for their financial and morale support. I also wish to thank my brother Chilaka Njoku and my other five siblings for their immeasurable support. This acknowledgement would not be complete without mentioning my darling wife and beautiful daughter; Fatima and Amarachi; who showed me remarkable love throughout this study.

Finally, I wish to extend my most warm thank you to my exceptional supervisors; Professor Kevin Barber, Dr Roger Beach and my DRB Tutor Dr Hugh Lee for their contributions in making this research successful.

## **DEDICATION**

This research is dedicated to my parents Sir and Lady Benjamin I. Njoku for their endless support during this study.

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## LIST OF ACRONYMS

AfDB - African Development Bank

AsDB - Asian Development Bank

APM - Association for Project Management

APMBoK - Association for Project Management Body of Knowledge

BART - Bay Area Rapid Transit

BMPIU - Budget Monitoring and Price Intelligence Unit

BPEN - Bureau for Public Enterprise of Nigeria

C - Closing

CBN – Central Bank of Nigeria

CCPM - Critical Chain Project Management

CPM - Critical Path Method

DFID – Department For International Development

E& C – Executing and Controlling

EF – Economic Factor

ERP – Enterprise Resource Planning

EVM - Earned Value Management

HDI - Human Development Index

GDP - Gross Domestic Product

I – Initiating

IT – Information Technology

LIP – Large Infrastructure Project

MDG - Millennium Development Goals

NAO UK- National Audit Office UK

NCC – National Communication Commission

NEPAD – New Partnership for Africa's Development

ODA - Official Development Aid

OECD - Organization for Economic Co-operation and Development

OGC - *Office of Government Commerce*

P - Planning

PC- Per Capital

PERT - Program Evaluation Review Techniques

PEST – Political, Economic, Socio-cultural and Technological

PF – Political Factors

PG – Project Governance

PGP – Project Governance Principle

PHCN - Power Holding Company of Nigeria

PM – Project Management

PMBOK – Project Management Book Of Knowledge

PMI - Project Management Institute

PRINCE2 - PProjects IN Controlled Environments 2.

PPAC - Presidential Projects Assessment Committee

PPP - Private-Public Partnership

S-CF – Socio-Cultural Factors

SWOT – Strengths, Weakness, Opportunities and Treats

TF – Technological Factors

WBS - Work Breakdown Structure

## CHAPTER 1.0

### INTRODUCTION

#### 1.1 Development of the research focus

##### 1.1.1 Background

The decision to embark on this research was inspired during a four-week holiday to Nigeria, in December 2008. It was pathetic to see the state of electric power supply in Owerri, Imo state, Nigeria. The story below summarizes what happened during the holiday:

*‘There was no electric power supply in Owerri, for the four weeks during my stay. One afternoon, in the company of a few friends, I went to the Power Holding Company of Nigeria (PHCN) office in the city to find out what was the problem. We met an engineer who informed us that a brand new transformer was installed six months ago to cover the region but this transformer had gotten damaged five months after installation. When we asked what the cause of the damage was, he suggested that the transformer was used beyond its specified capacity most times, due to the high electricity demand from the region. The engineer also pointed out that the electricity supply to the region from the national grid was very low compared to the demand for it; hence the over-loading of the transformer and irregular supply of electricity throughout the region. He went on to explain how several electric power generating and distribution station projects had been approved by the federal government but the stations either failed to generate up to their initially specified capacity or the projects never reached completion due to too many delays and subsequent abandonment in some cases. He concluded by attributing the failed projects to poor management of project resources and poor communication during the project lifecycle.’*

After the visit to Nigeria a curiosity to find out solutions to the pressing project management issues was initiated. This curiosity brought about a strong interest in browsing the Internet to identify the best project management

practices and solutions for improving the performance of projects. This was done using Google Scholar search engine to look for articles and publications relevant to my interest. However, the Internet browsing showed that there are numerous project management techniques and solutions developed over the last century. These solutions have been applied in several countries, but for some unclear reason seem not to be able to permanently end the large deviation of projects from their original specifications/estimations across the globe (Nguyen et al 2004). Most of these techniques are standardised but the performance of different projects; in terms of meeting their original cost, time and scope specifications; still differ whilst applying the same techniques (Nguyen et al 2004). This situation prompted the need to further investigate if these solutions and techniques are being applied properly. If the solutions are applied properly, then why do some large infrastructure project still performs poorly and others don't regardless?

Large Infrastructure Project (LIP) is a term that will be used in this write-up to represent all projects that cost more than £1 million and draws a lot of public interest, due it having considerable impact on society, environment, and finances. LIPs may be water, electricity, transportation or telecommunication related.

The initial interest of this research was to look at electricity infrastructure projects in Nigeria but the investigation process identified that most electricity infrastructure projects involve large capital investment and drew public interest; thus can be considered as LIP.

Besides, other types of LIPs in Nigeria such as transportation, telecommunication and building LIPs also faced similar performance issues (Obasanjo, 2004). Therefore, the focus of the investigation expanded to large infrastructure projects in general rather than electricity projects only. This is driven by the assumption that covering LIPs in general will provide a wider range of projects to learn from thus, more materials to use for the investigation. Also, if the problems faced amongst LIPs are similar, a broader

understanding of various types of LIPs should be of greater value to the project management body of knowledge, than of a single type of LIP.

Reaching this decision about the focus of the research, a discussion group with some friends; who are professionals in the Nigerian project management sector followed. This was to get a better understanding of the performance of all types of LIPs implemented in the country. The knowledge from the discussions suggested that there was a growing perception that LIPs in Nigeria and other developing economies, performed worse than in developed economies. The overruns, total abandonment, and poor quality final delivery is frequent in most LIPs in Nigeria and not just seen in electricity projects (CBN, 2006). Thus, this creates the need to verify this perception and why it is, if it is true. Further discussions on the justification of this research will be presented in section 1.4

## **1.2 Research aims, questions, scope and focus**

### **1.2.1 Research aims**

This research aims to contribute to knowledge in the area of project management and governance by identifying the relationship(s) between adherences of LIP in Nigeria to project governance principles (PGPs) and their performance in terms of following project management common practices as well as delivering the project to expectations and agreed plan. This knowledge will provide an insight on whether PGPs can be used to improve the performance of LIPs in developing economies and if so, identify which PGPs that are critical to improving LIP performance.

### **1.2.2 Research questions**

This research will seek to answer the question:

To what extent does adherence to PGPs have an impact on the outcome of LIPs implemented in Nigeria; as an example of a developing economy? The research question will be answered by implementing the following steps:

1. Identifying to what extent LIPs implemented in Nigeria adhere to PGPs
2. Identifying the relationship between adhering to PGPs and the adherence to PM common practices
3. Identifying the impact on adhering to PGPs and PM common practices from the impact of adverse political, economic, social and technical influences on the LIPs
4. Then identifying the relationship between different adherence levels to PGPs and performance of the LIPs in Nigeria, in meeting their original cost, scope and time estimations
5. Finally, review if there are patterns that can indicate how adherence to PGPs impact on the overall outcome of LIPs implemented in Nigeria using the three relationships identified in steps 2, 3 and 4



### 1.2.3 Summary of Methodology

The following choices of different research methodology options were made based on the nature of the study, the access to data, the resource limitations of research and the best fit for research focus.

1. Research strategy = Case study survey
2. Research approach = Inductive
3. Research method = Mixed method (qualitative and quantitative)
4. Research philosophy = Positivism
5. Time horizon = Cross sectional
6. Data collection = Semi-structured Interviews and questionnaire/template
7. Data analysis = Theory triangulation

### 1.2.4 Research focus

The scope of this study has been defined by the research aim and questions. Thus, evaluating the adherence to PG principles, adherence to PM common practices and performance of LIPs, in meeting original estimations in Nigeria, will be the focus of this study. This research will only study LIPs implemented in Nigeria. Nigeria has been chosen as the case study in this research, as access to data will be easier because, contact with people in the project management sector of Nigeria, has been established after the initial discussion group.

After examining the list of developing economies as published in CIA world Fact book, it was realised that developing economies fall into a spectrum of countries. The spectrum is made up of lower-end countries with minimal industrialisation; mid-way countries with some industrialisation but not significant enough and higher-end countries; with significant industrialisation but not sufficient to be categorised as developed economy. Nigeria falls into the midway countries while countries like Malaysia and China fall into the higher-end of the spectrum. Other countries such as Tanzania and Uganda fall into the lower-end of the spectrum. Thus Nigeria is a good example of an average developing economy.

Furthermore, developing economies are mainly defined by the relationship between the level of industrialization and the country's population (CBN, 2006). Nigeria is the most populous country in Africa; with a population of over 150 million people (see table 1.1); but with a very low level of industrialization (CBN, 2006). It also suffers from insufficient electricity to support her large population and few industries in the country (CBN, 2006). The United Nations in her Human Development Index (HDI) has provided a gauge for measuring a country's level of development. The level of development is measured using statistical indexes, such as; Per Capital (PC), life expectancy, Gross Domestic Product (GDP) etc. The literacy level and life expectancy of Niger are one of the lowest in the world, which falls within the defining criteria for a developing economy; making Nigeria a good example of a developing economy. Nevertheless, as much as the circumstances that apply in Nigeria in terms of development should be similar to most developing economies, it does not mean that the circumstances in Nigeria are identical to all other developing economies. Therefore, the findings from the Nigeria case study may not be generalised completely for all other developing economies but should serve as a guide to what is obtainable in a developing economy. See table 1.1 for more details.

<u>Name</u>	<u>Gross Domestic Product</u> (in billions)	<u>GDP per capita</u>	<u>Population</u>	<u>Literacy Rate</u>	<u>Life Expectancy in years</u>
Pakistan	\$465	\$2,482	187,342,721	50%	66
China	\$9,330	\$7,634	1,357,380,000	95%	72
Colombia	\$435	\$9,735	44,725,543	90%	75
Nigeria	\$514	\$2,435	155,215,573	68%	48
Philippines	\$351	\$3,451	101,833,938	93%	72
Kenya	\$66.0	\$1,608	41,070,934	85%	59
Yemen	\$63.4	\$2,627	24,133,492	50%	64
Ghana	\$62.0	\$2,500	24,791,073	58%	61
Tanzania	\$58.4	\$1,367	42,746,620	69%	53
Bolivia	\$47.9	\$4,732	10,118,683	87%	68
Cameroon	\$44.3	\$2,249	19,711,291	68%	54
El Salvador	\$43.6	\$7,176	6,071,774	81%	73
Uganda	\$42.2	\$1,218	34,612,250	67%	53

**Table 1.1:** World Economy statistics; source: CIA world Fact book, accessed 01<sup>st</sup> May 2013 (N/B developed economies are excluded from this table as they are irrelevant in the comparison)

### 1.3 Brief review of literature

This literature review will focus on investigating the performances LIP in both developing and developed economies. The literature review will also study the root causes of any poor performances identified in both classes of economies.

The review of relevant literature suggests that the poor performances of LIPs in both developing and developed economies have not improved much over the years, regardless of efforts to develop new techniques to tackle it (Flyvbjerg et al 2005). However, the underlying factor(s) that contributes the most to this situation has not been verified as numerous authors offer different points of view on this. Several techniques; such as the critical path analysis, critical chain project management, Program Evaluation Review Techniques PRINCE2, Six Sigma, Stage-gate models etc; have been developed over the years that should help in resolving the issue of LIPs not

meeting their original specifications (Al-Momani 2000; Chan et al, 1997; Aibinu et al, 2002; Arditi et al, 1985; Cusworth et al, 1993; Dlakwa et al, 1990; Flyvbjerg et al, 2003; Flyvbjerg et al, 2002; Flyvbjerg, 2005a). However, Flyvbjerg, (2005a) suggest that the level of poor performance has not reduced. Thus, it is questionable why the techniques and solutions are not yielding results in terms of LIP performance. It could be attributed to a possibility that the numerous techniques and solutions are not working or that a fundamental problem is being overlooked because poor performance; such as overruns; in cost are beneficial to some (Flyvbjerg, 2005a). However, it is arguable that researchers have been totally incapable of identifying how to make these techniques yield better results, over these past years (Bekker et al, 2008). Thus, one is left to think that a possible approach that can tackle the issues of poor performances of LIP may have been ignored intentionally.

Furthermore, reports by Flyvbjerg et al (2003), Flyvbjerg et al (2002), Flyvbjerg, (2005a), suggest that cost and time overruns amongst other issues in LIP has been persistent regardless of numerous project management techniques that have been developed over the past long history of project management. Flyvbjerg (2005a) stated that 9 out of 10 projects have cost overrun. He found out that there were overruns in the 20 nations and 5 continents covered by his study. Thus, overruns appear to be a long lasting globally spread issue. Bent Flyvbjerg proposes that cost overrun has not decreased over the past 70 years. Does this mean that no learning has taken place? Or that project promoters and forecasters have learned what there is to learn, namely that cost overrun pays off; cost overrun is a simple consequence of cost underestimation and underestimation is used tactically to get projects approved and built.

However, there is a growing perception that the performance of LIPs in developing economies is worse than in developed economies. This can be seen in the extremely long time overruns of three years and over; sometimes resulting in the total abandonment of LIPs in Nigeria. An alarming figure of 11,886 LIPs are yet to be completed over the past twenty years. This was reported by the Presidential Projects Assessment Committee (PPAC) set-up in March 2011, by President Goodluck Jonathan of Nigeria to look into cases

of uncompleted Federal Government projects. These projects range from steel plant development projects to construction of roads (PPAC, 2011).

These lengthy overruns have been mainly attributed to inadequate planning and financing of the project cycle which results in delaying in payment, wrong estimation, faulty design, influences on decision-making process, use of ineffective project management techniques, poor supply chain and civic infrastructure (Aibinu et al, 2002). Aibinu et al (2002) proposes that inadequate planning is the root cause of lengthy overruns and large number of uncompleted LIPs in Nigeria. This notion was supported by the research works of; Aibinu et al (2002), Frimpong et al (2003), Sonuga et al (2002), Zou et al (2007), Luu et al (2008) and Assaf et al (2006).

On the other hand, reports by Al-Momani (2000), Nguyen et al (2004), Ogunlana et al (1996) and Muriithi et al (2002) suggest that the use of inappropriate project management techniques is the root cause of poor performance of LIPs. These reports argue that an assumption of economic stability by the developers of most project management techniques overlooks the fact that most developing economies have not yet attained this economic stability; thus, these techniques should not function properly in developing economies. The gap in project management techniques development and other economic related matters are the main difference between developed and developing economies (see table 1.2).

Characteristics	Developed Economies	Developing Economies
Economy	Stable and more predictable	Unstable and less predictable
Supply chain	Reliable	Unreliable
Project management tools and techniques	Develop and use	Do not develop but use those developed in developed economies
Infrastructure development	Very developed	Under developed
Industrialisation	Significant/sufficient in relation to population	Not Significant/sufficient in relation to population

**Table 1.2:** *The differences between developing and developed economies*

Several other arguments have been made on the root cause of the high rate and level of poor performance of LIPs in developing economies but one aspect that was been overlooked is that it should be the responsibility of some people involved in the project; such as sponsors and stakeholders to

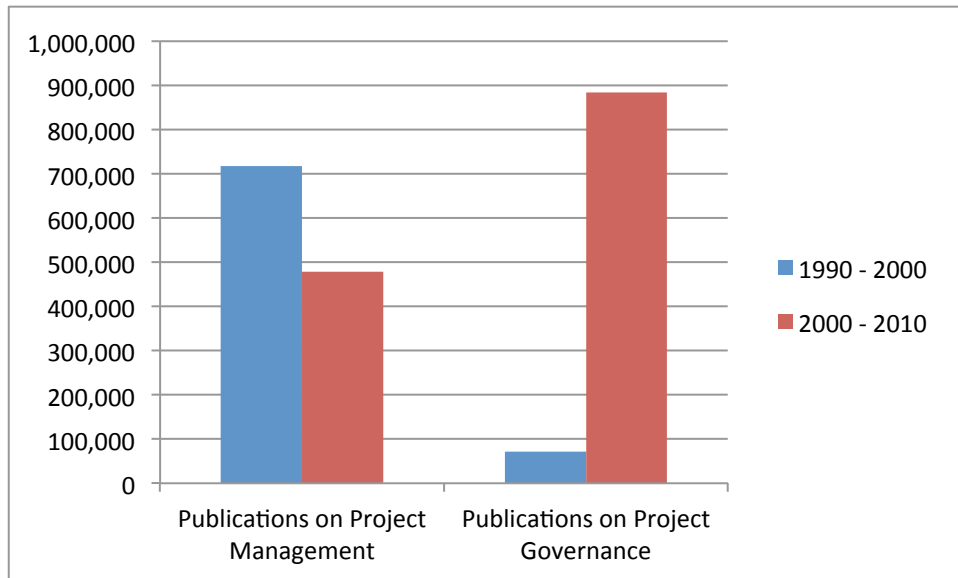
ensure that the planning process, choice of project management techniques, financial arrangement etc is adequate; this role can be considered as governance of the project. This hint at the critical cause of the poor performances may well be related to a lack of governance. The projects seem to need better level of directing in order to ensure it following the right set of project management techniques, develop an adequate plan or make adequate financial arrangement.

However, Bekker et al (2008) suggests that introducing governance to the management of project may be the way forward in providing better monitoring, accountability, responsibility and clarity. He argues that in the 1980s the introduction of corporate governance to the management of activities in the corporate world was successful in resolving the issues of poor management that existed then.

*“Corporate governance provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.” (OECD, 2004)*

Project Governance (PG) is a guide that provides principles of corporate governance, for the management of projects, with due consideration made of the temporary and unique nature of projects. A further review of relevant literature suggest that most of the issues affecting the performance of LIPs in general and in developing economies in particular are more effectively addressed by PG than any of the existing project management solutions and techniques (Liu et al, 2005). Moreover, more academic work has been directed towards project governance in the last decade when compared to previous years; refer to figure 1.1. The concept is relatively new compared to project management (Liu et al, 2005) but search on the web using the Google scholar search engine show a rapidly growing number of publications on project governance from 71,200 between the years 1990 and 2000 to 884,000 between 2000 and 2010. On the other hand publications in project management saw a large drop from 718,000 between the years 1990 and 2000 to 479,000 between years 2000 and 2010 (Liu et al, 2005b); see figure

1.1 below. This trend suggests a change in focus from project management as a way of delivering a successful project and an increase in focus on project governance. This change could be as a result of the fact that research into project management approach has been extensively researched but project issues are still persisting.



**Figure 1.1:** Search result of publications on project governance vs publications on project management (2 September 2011)

This new focus on PG as a possible way to improve the level of poor performance seen in LIPs has guided this research towards investigating if a lack of governance is the most critical factor that causes LIPs to perform poorly in meeting their original specifications in developing economies.

#### 1.4 What is the research significance?

Developing economies are generally considered as economies that have not achieved a significant degree of industrialization relative to their populations (CBN, 2006). This suggests that most developing economies would remain unable to achieve a significant degree of industrialization as a result of; inadequate electric power generation and distribution, good roads, railway systems, potable water, bridges and all other basic infrastructures that support a developed economy. The lack of sufficient electricity for instance,

usually results in industries running on private electric power generators. This subsequently increases their cost of production and makes it hard for their products to compete effectively in the market against cheaper products that may have been imported from outside the country (Weiss, 2003). In effect the developing economies stand a low chance of ever becoming developed in the absence of sufficient and adequate electricity (OECD, 2005) and other basic infrastructure. Furthermore, trade and employment being the main drivers of economic development are dependent on functional transport and electricity infrastructures (DFID, 2012).

The positive correlation between economic development and infrastructures such as transportation and electricity has been widely acknowledged in several publications; most notably NEPAD-OECD Investment Initiative, 2011 and ICF Annual Report, 2010. Hence, the need to ensure that large infrastructure projects are completed successfully in developing economies cannot be over emphasized (Arditi et al., 1985). Effective transportation and electricity infrastructure will enable a faster growth of developing economy and ensure that the Millennium Development Goals (MDG), of the United Nations, is achieved.

In Nigeria for instance, government reports on the state of electricity in the nation suggest that the high level of hardship and suffering faced by the general public is strongly related to the state of the electricity generation and supply in the country (Adenikinju 2003) The report of Adenikinju (2003), highlights the following list of impacts as key negative effects of poor infrastructure on the countries growing economy:

1. Effect on large companies: several professional bodies have made continuous complaints on the negative effect the poor supply of electricity is having on companies, in Nigeria. These companies are spending large sums of money over the years to provide large electricity generators as alternatives to the poor electricity supply. These companies often use the generators as the main supply of electricity to avoid the interruption that they would face from relying on the epileptic supply from the national grid. Due to this high cost of



running the generators all day and all year round many companies and factories have been reported to be shutting down (Adenikinju, 2003).

*“Over 100 companies including multi-nationals across the country have closed down in recent times. Textile/garment, chemical/leather are some of the affected sectors. Others such as those in the cement industry are unable to operate at full capacity. Both situations result in job loss and increase in levels of unemployment”*  
(Adenikinju, 2003).

2. Relocation: Reports show that a lot of multinational companies have relocated to nearby economies as a result of the difficult challenges posed by the poor electricity infrastructure and supply.
3. Effect on investments: Investors are being chased out of the country due to the persistent power supply problem, as the cost of doing business in Nigeria is not attractive.
4. Failure of small and medium size businesses: Several small and medium sized businesses have been driven out of business as a consequence of the high cost of running private electricity plants, and reports show that those still in business charge high costs for their services.

Cohen, (2007), provides further evidence to the argument of Agunbiade (2009). He suggests that several deaths have occurred in households as a result of explosions caused by adulterated kerosene used in lanterns as an alternative to providing light in homes during blackouts. Furthermore, he suggested that bad roads have caused several accidents as well as companies finding it difficult to transport their products from manufacturing plants to the market.

On the other hand, developed economies rely on the effectiveness of their infrastructure to remain developed (Cohen, 2007). Electricity and transportation infrastructures form the heart of most developed economies, thus, expansion and maintenance of these infrastructures is essential to

sustaining these economies. Cohen (2007) studied the cost impact of infrastructure and found that the productivity of the USA economy was strongly tied to the Infrastructure development of the country.

Moreover, considering the huge investments being made in developing infrastructure across the globe, it is only sensible to ensure that these funds, effort and time produce their expected result in terms of cost, duration and initial specifications. However, the study by Flyvbjerg et al (2005) suggests that nine out of every ten large infrastructure projects has had a cost overrun. The study covered twenty nations and five continents and all of the countries had experienced cost and time overruns in the last 70-year period covered, but yet, estimates have not improved over time.

## 1.5 Summary of chapter

### 1.5.1 Summary

In the review of literatures, there were indications of a new focus on governance. Besides with numerous project management techniques existing whilst LIPs keep performing poorly, it is arguable that project governance should be given a try. This argument is further reinforced by clear indications that the introduction of corporate governance helped resolve the issues of poor management in the corporate world in the 1980's; with the main difference between applying governance in a corporate organisation and a project being the finite duration of projects. Recent reports show that several prominent organisations have developed their own project governance guideline but these guidelines differ in the practices they specify for actualising good governance of project management.

However, most of the available project governance guidelines that have been reviewed in this research are developed and used in developed economies. This indicates that if project governance guideline were standardised in the future, the guideline may not be adequate for application on LIPs managed in developing economies, if the impact of adherence to PG principles on LIP outcomes in developing economies is not identified. As identified in the review of literature; on differences between LIP management in developed economies and those in developing economies; clear differences in performance levels exist between these two economic regions. If these differences are not taken into account, the project governance guidelines could possibly fail to improve the performance of LIPs in developing economies. Thus it is essential to identify the principles in the comprehensive list of all good project governance principles that tackle the causes of poor performance of LIPs in developing economies. This will be done by examining if there are any relationships between the performance of LIPs and the level of project governance practices they deploy in the LIP life cycle.

### 1.5.2 Thesis outline

The thesis will be written in seven chapters. Chapter one; introduction; will introduce the thesis and discuss the motivation, significance, and history of how the research idea has evolved into the final topic. Chapter two; literature review; will present the review of relevant literatures used for identifying the major project management issues faced by LIP's in developing and developed economies, the differences between project management in developed and developing economies and will also review the approaches used in tackling the project management issues. Chapter three will discuss project governance and examine the importance of it to project management in order to identify if it has answers to the poor performance of LIPs in developing economies. Chapter four will discuss methodology, research methods and design that best suits this research based on the methods used in previous research and the challenges this research aims to overcome. Then chapter five will examine the adherence levels to PGPs, adherence to PM common practices and performance of LIPs. Chapter six will evaluate the relationships between the factors identified in chapter five and present all results from these evaluations using maps. Chapter seven will try to answer the research questions, conclude the findings of the research; present the guideline and make recommendations that will hopefully make an improvement on the large infrastructure project performance in developing economies.

## **CHAPTER 2.0**

### **INVESTIGATING THE STATE OF LARGE INFRASTRUCTURE PROJECT MANAGEMENT IN DEVELOPING COUNTRIES**

#### **2.1 Introduction**

This chapter will present the review of relevant literature on project management with the focus being on providing answers to the questions that motivated this research study. Section 2.1 will introduce the chapter and define the key terminologies that will be used in the chapter. Section 2.2 will review the views of different authors on whether the LIPs fail more in developing economies. Section 2.3 will review the views of different authors on what is/are the cause(s) of the difference in LIPs success rates in developed and developing economies. Section 2.4 will review the views of different authors on how well LIPs are managed in developing economies while section 2.5 will review the views of different authors on what the way forward is, in eliminating or reducing failure in LIPs managed in developing economies. Finally section 2.6 will present the summary of the chapter.

##### **2.1.1 Defining project failure and success, in the context of this report**

The following terms defined below will be used in describing the meaning of project failure and success, in the context of this research:

##### **1. Cost overrun**

The final/actual cost of the project was over the original estimated cost, which usually results in application for more funds by the project manager. The process of getting this additional funding approved by project sponsors/steering committee could lead to delays to other project activities depending on the amount of funds requested.

##### **2. Time overrun or delay**

This is when the original time estimation for the project is exceeded. Besides, due to the complexity of LIPs, it is almost certain that the scope of the project

would change as the project progresses; hence, the original time estimation should take this factor into consideration and introduce “slack periods” in the estimations. When the overruns still occur then the project has performed poorly against the estimated duration.

### **3. Dissatisfactory finished project**

This is when the owner(s) or stakeholders are not satisfied with the final product of the project as a result of some or all specifications delivered not meeting the stakeholders' expectations.

### **4. Abandonment of project**

This is when a project is uncompleted and the sponsorship is withdrawn or unavailable. This implies that no progress is going on for a long period of time; this is usually caused by poor funding arrangement for the project in the first place, benefit assessment and poor strategic assessment of the project.

### **5. Successful Project**

In this report, a project will be considered as successful if it experiences no cost overrun, time overrun and the final project delivered satisfies the expectations of the owner(s) and/or stakeholders.

### **6. Failed Project**

On the other hand, if a finished project does not satisfy the expectation of the owner(s) and/or stakeholders or experiences time and cost overruns then it will be considered as having failed. Furthermore, in an extreme case where a project is abandoned this will also be considered as a failed project.

## **2.2 Do LIPs fail more in developing economies?**

The rate of project abandonment, cost and time overruns in developing economies are perceived to be relatively very high and many reports attribute this more to corruption than technical under performance (Assaf et al, 2006). This research focuses on identifying the technical underperformance that contributes to poor project performance and will not look into any aspects of corruption.

In this chapter, the difference between the levels of performance of Large Infrastructure Projects (LIPs), in developing and developed economies, will be examined. Also the main project management issues that cause the poor performance of LIPs in developing economies regardless of numerous project management techniques will be evaluated and identified.

In the management of LIPs, the stakeholders/sponsors usually should have an expectation of what they expect the project to deliver, how much it should cost, duration it should take to complete and the scope of what it should involve and include. The stakeholders/sponsors are normally rigid with one or two of these constraints, for instance they may be rigid on the time they need the project to be delivered thus may be flexible with budget and the scope to make sure the project is completed on time, to expectation. Or the other way round, they may be rigid on the budget but flexible with the scope and time. Whichever the case may be the expectations of the stakeholders and sponsors must be satisfied for the project to be considered as having performed well. This is usually not the case in LIPs as there are reports showing that most LIPs go over their project, planned budget, planned duration or planned scope (Flyvbjerg 2005a).

In developing economies reports by Aibinu et al (2002), Frimpong et al (2003) and Assaf et al (2006) suggests that cost overrun, time overrun, scope creeping and poor quality of final delivered project occur very often. Therefore, it is fair to assume that the four possible failures of management of a project all apply in developing economies. However, the causes of these failures vary from one country to another due to difference in environmental, political, economic factors etc. Project management methodologies have been developed extensively over the years to ensure projects do not perform

poorly but yet there is no sign that project have stopped performing poorly; especially LIPs (Bekker et al 2008). There is a perception that this situation is more frequent and intense in developing economies than in developed economies. A presidential report on LIPs in Nigeria shows that 11,886 key public sector LIPs; steel plants, healthcare and electricity infrastructures; had been left uncompleted over the last forty years. A similar situation occurs in other developing countries, example Ghana, Malaysia and Ivory Coast (Frimpong et al 2003). It is fact that this high rate of LIP failure is not seen in developed economies, as there are no reports suggesting such figures of abandoned infrastructure project in developed economies (Nguyen et al 2004). Therefore, it is evident that LIPs fail to meet their original goals/estimations more frequently in developing economies. The next section will examine the cause(s) of this phenomenon.



### **2.3 What is/are the cause(s) of the difference in LIP success rate in developed and developing economies?**

A lot of research work has gone into identifying ways to improve the performance of LIPs in developing countries as can be seen from the vast number of texts: a search using Google Scholar search engine on the performance of LIPs in developing countries produced 12,700,809 texts. Several of the texts report that, LIPs in developing economies such as African and Asian economies, suffer large deviations in their expected deliverables, budget and durations often (see Arditi et al 1985; et; Ahmed et al 2003).

On the other hand in developed economies such as European and North American economies, even though LIPs do not always perform excellently to planned deliverables and expectations, the level of deviation is less and better managed (Nguyen et al 2004).

Investigating the causes of the difference in LIP success rate in the two economic regions; developing and developed; will be examined under the following headings:

- Management and availability of resources
- Supply chain and infrastructure
- Development and deployment of suitable techniques, tools and methodologies
- Influence on decision making process
- Control of external factors on LIPs

These headings have been identified from the review of relevant literature on the subject.

### 2.3.1. Management and availability of resources

In developing economies there is an insufficiency of skilled labour to assist in performing some of the key activities in an LIP (Ministry of Planning and Investment, Nigeria, 2003). However this is not applicable in developed economies. For instance some feasibility analysis, monitoring and control techniques require specialist skills but evidence by Aibinu et al (2006) suggest that the availability of such skills is lacking as project management techniques have not been fully appreciated in Nigeria and most other developing economies. In developed economies awareness and education is higher (Nguyen et al 2004). In the UK, for example, the government has adopted PRINCE2 methodology, which indicates their full understanding of the importance of project management. Furthermore, as it is a compulsory practice to use PRINCE2 in projects, many people get certified in the techniques and also PRINCE2 certification is now a prerequisite in employing people particularly in the public sector of the UK. This can be further seen, as modern educational resources are available in developed economies and lacking in most developing economies. On the other hand, in the case of ground water infrastructure project, in Ghana, Frimpong et al (2003) ranked poor monthly payment of workers as the major cause of the delay experienced by this project. The report suggests that this difficulty in payment was due to inflation in material prices, change in currency exchange and poor feasibility at the initiating stage of the project. Reports by Flyvbjerg et al (2005) and Bekker et al (2008) show that these issues occurred in the UK, USA and other developed economies but does not result in years of delay/abandonment of the project; this is arguably due to better management of resources, but could also be related to the availability of financial resources to support the project cost overruns. In the groundwater project, because of scarcity of funds and too many infrastructure projects needing to be done the large cost overrun could not be accommodated easily. In effect poor management of scarce resources is a major issue here. Sou et al (2007), Sonuga et al (2002), Luu et al (2008) all report similar cases where in flexibility due to initial poor financial estimation resulted in years of delay to project. Sonuga et al 2002, suggested that the source of funding for projects

were usually unreliable and recommended the introduction of development banks to help in providing stability to project funding, in developing economies. Even though a better planning and management process should improve the performance of the LIPs, but due to the complexity of LIPs, poor knowledge/skill of project management, most LIPs in developing economies are still likely to pose a challenge to the performance of LIPs. In some cases the projects may not be in line with the strategic goal of the organisation (government) due to political or social biases but if the financial resources were available such projects could be at least completed or formally closed to avoid wasting the investment already made. Even though corruption has been linked with such abandonments it cannot be attributed to the abandonment of projects, as corruption also exists but does not necessarily hinder project completion in developed economies (Flyvbjerg 2005b). For instance with a GDP per capita of \$2435 and a population of approximately 150 million in Nigeria, \$516 GDP per capita and a population of 91 million in Ethiopia and \$1218 GDP per capita and a population of 35 million etc the impact of corruption or poor management of resources will be higher in such developing economies than in a developed economy where the GDP per capita is much higher. Therefore, it can be seen that availability and management of resources is key to the performance of LIPs; this will help this research in defining its objectives.

### **2.3.3 Supply chain and infrastructure**

Supply chain is a key part of the life cycle of any LIP (Long, et al, 2004a and 2004b). This usually entails the procurement of materials on time to specification and at the right price estimated in the project plan. However, due to price escalation occurrence due to factors such as inflation, importation processes and foreign exchange fluctuations LIPs can end up with cost and time overrun. The United Nation defines; a developing economy as one, which the level of industrialisation achieved in relation to the population, is insufficient; this suggests lower industrialisation in developing economies compared to developed economies. In developing economies most of the materials needed for LIPs are most often imported

making it harder to control external factors that may affect the supply chain. For example a construction organisation known as Julius Berger, in Nigeria, are known for their reputation in completing projects to a very high specification on time and on budget. This organisation manufactures most of the materials they use in construction, locally in Nigeria. The organisation also has private ships and planes for delivering materials they need from outside the country (Nguyen et al 2004). This gives the organisation much more control over the supply chain process, thus contributing strongly to their ability to deliver LIPs to agreed standards and estimations. However this is a one off case as most other similar organisations in Nigeria do not have the finances or infrastructure to attain this level of control, therefore the highly fluctuating economy, inflation and unpredictable importation process in the country play a strong part in their ability to deliver. Most of the local materials are usually not desirable, due to poor standard control in the country, hence making it inevitable to source one or more materials from outside the country.

On the other hand, in developed economies there is better quality control and more reliable infrastructure to support local manufacturing of materials desirable in construction also the better stability in the economy provides the ability to predict inflation and duration of importation (Nguyen et al 2004). This suggests that the supply chain process in developed economies; even though they may not be identically the same, do provides less of a challenge to LIP performance than in developing economies. In this research, this fact will be used in understanding the processes that are involved in LIP management in developing economies.

#### **2.3.4 Development and deployment of suitable techniques, tools and methodologies**

Nguyen et al (2004) suggests that developing economies struggle to be competitive commercially due to their low industrialisation level, thus contributing to their slow adoption of project management tools and techniques. He went on to discuss the difficulties that exist in applying modern project management techniques and principles to developing economies. An example of this is most of the LIPs in developing economies

depend on scarce government and international funding organisations, such as, world bank, Asian Development Bank (ADB) and Official Development Aid (ODA) for funding, they have to meet the criteria for such funding. These organisations release the funds based on the effective management of funded projects. The ODA reports a slow release of funds yearly which indicates low confidence in the quality of the projects, which often experience cost and time, overruns as well as scope changes. Even though several factors contribute to this project performance issue Nguyen et al (2004) suggests that lack of effective modern project management training, for project managers and other professionals, involved in the project is the major contributing factor. In order to retain the sponsorship techniques and tools that are familiar and acceptable to the project the project team in most cases adopts sponsors. However, the application of these techniques faces obstacles arising from the unique nature of developing economies. These techniques are developed in developed economies with an assumption of economic rationality, which is not the case in developing economies (Nguyen et al, 2004). Also, Nguyen et al (2004) suggests that the following factors provide obstacles to the management of modern project management techniques and technologies in developing economies:

- Poor project control implementation
- Low level of project management training from institutions of higher learning
- Lack of active exchange of ideas, with regards to project management training methodologies
- Lack of suitable training materials and piecemeal training in modern project management materials especially in the areas of international procurement, selection and evaluation of development project

Therefore as shown above there are hardly any standardised and effective project management techniques and methodologies developed in developing economies and the application of the techniques developed in developed economies face challenges when being applied, in developing economies. Developed economies thus have the advantage of applying techniques, tools

and technologies that are suitably developed for their project environment, unlike in developing economies.

Zou et al (2007) support the same view by suggesting that 'contrary to the common belief that the Western-oriented techniques of project management are just straight forward procedures that anyone can learn and implement, there are considerable cross-cultural problems in using the approach in non-Western Countries'. However, Mbatha (1993) proposes that the most common project management approaches used in developing countries, includes: PMBOK Guide, APMBOK (4th edition), PRINCE2 and Australian National Competency Standards for Project Management and these are all management approaches developed in developed economies.

Besides, a late 1980s study of successful managers in Kenya found that a crucial factor in their success was the ability to build and maintain political connections - ensuring regular access to top politicians (Leonard, 1987 and 1988). This may not be a success-enhancing factor for a country like the United Kingdom. In Kenya, Mbatha (1993) developed a project management framework after research on the critical factors effecting project management performance in Kenya; this framework has been used in a number of successful projects. Furthermore, the suggestion by Jessen (1988) that some cultures are more suitable for project management than others further emphasises the point. Blunt et al (1997) have extended these concepts to leadership theory, and Jessen (1988), to the nature of managerial work, as well as managers' attitudes and beliefs about their work.

Therefore, it is important that management techniques developed in developed economies for delivering LIP, are tested in developing economies to verify if it is adequate before being deployed in the actual LIPs. On the other hand the techniques can also be developed originally in a developing economy. In this research, this fact will be taken in to consideration in shaping the research objectives.

### 2.3.5 Influence on decision making process

Blois et al (2011) looked at the differences in LIP management in developed and developing economies, in terms of influences that the project experiences from formal and informal communication structures. Their work suggests that informal communication, to a large extent, defines the relationship between project participants, whilst formal communication determines the detailed understanding of the project deliverables. They further suggest that informal communication with the procurement units is more influential in projects in developed countries while informal communication with top management, within the client's organisation, has more influence in developing economies. The higher levels of informal communication in developing economies occur between top management of client organisation, consultants and contractors, whilst in developed economies the higher levels of informal relations occurred amongst the contractors, consultants and employees of client organisation. The question is then why are the influential parties different in the two economic regions?

Culture and social behaviour also plays a part in the decision making process of LIPs managed in developing economies as against those managed in developed economies (Aibinu et al 2006). Even though every country has some cultural and social behaviour the key influence on the cultural and social behaviour of developing economies is the momentary selfishness of people and lack of effective techniques to monitor and control it (Nguyen et al 2004). This ambition leads to top management in clients/ sponsorship organisation having to take the key decisions in the project to ensure effective management and accountability. On the other hand, in developed countries this individual ambition is not as intense and techniques to monitor and control them exist which makes it possible for the top management to delegate authority. Therefore, there is a strong suggestion and evidence that the decision-making process, in developing economies, is different from that of developed economies and this may have some strong impact on the performance of LIPs managed in the two economic regions.

### 2.3.6 Control of external factors on LIPs

The performance of a project is largely dependent on the implementation of a good project management process. However, the implementation of this process can be influenced to go wrong by factors other than core management practices, these factors are called external factors to the project (Flyvbjerg et al 2003). External factors may include political, social, economic, legal and civic influences. To reduce or eliminate the influence of the external factors, it is important that a monitoring and control structure is in place. Most developing countries, suffer from policy instability; weak operating infrastructure; poor legal and political framework (Aibinu et al 2006).

Adedoyin Odunfa, the chief executive officer of information value chain consultants, Digital Jewels, in Nigeria, in his presentation on “A Holistic View of Nigeria’s Project Management Track-record” at the 2012 NCC conference in Lagos, Nigeria stated;

*“Nigeria has no comprehensive view, data, or statistics of national project management track record. What exists indicates an abundance of projects that failed to meet stakeholder expectations on one, some or all of the triple constraints were attaining project scope within the tripod of timeliness, cost, and quality expectation. As a result, many projects in the country have suffered to meet scope and expectation. It is against this backdrop that the African Development Bank (ADB) cancelled 80 percent of its projects in Nigeria, attributing the failure of the projects to the “Nigerian factor”.*

He went further to suggest that inadequate “checks and balances” and lack of awareness of modern project management practices makes the poor performances of projects worse.

However, in the same conference, a principal consultant at Lagos-based TIA Consultancy, Mary Fasheitan, argued that regardless of the past ignorance to project management in the public sector, recent trends show a growing comprehension and adaptation to project management in LIPs. The



consultants and other professionals in the conference came to an agreement at the end that bad communication between stakeholders, poor planning of schedule, resource and activities, lack of effective quality monitoring and control, and escalating cost are the top ranking causes of poor project performance in Nigeria.

The following issues have been identified as the major causes of projects not meeting their original estimations in most developed economies (Flyvbjerg et al 2003; Flyvbjerg et al 2002; Flyvbjerg 2005a; Aibinu et al 2002), :

1. Optimism bias
2. Strategic misinterpretation
3. Inappropriate estimation techniques

In developed economies, due to extensive use of project management techniques and methodologies, the issues of not being aware of project management practices or lack of effective quality control do not constitute the major contributor to the poor performance of LIPs. This indicates that the level of development of project management in developing economies is behind, when compared to that in developed economies. This could be because the existing project management techniques do not address the factors affecting the performance of LIPs in developing economies or because the factors that are peculiar to developing economies that affect the adherence to the techniques thus does not allow adherence to them. Whichever is the case, it is questionable how well LIPs in developing economies are managed for the failure of LIPs to be so high. Besides, there seems to be a need for developing economies to improve their practices in managing and delivering LIPs, as is indicated by their worrying LIP failure rate. This research will attempt to address this issue.

The next section will discuss the external factors/influences seen in projects and the implications for projects.

### 2.3.6.1 Political influences

Politics is the practice and theory of influencing other people (Painter et al, 2009). The study of the political influences in any organisation or group is very important because it indicates how decisions are made and how peoples interact with one another in an organisation (Painter et al, 2009). This provides a better understanding of the role of politics in the productivity of the organisation.

In politics, several methods are used in influence others. These may involve domination and subordination; stimulating and/or imposing political views on people; cooperation with other political views, decision-making and policies (Painter et al, 2009). Politics can be seen in different social ranks, ranging from families through to larger organisations such as; governments, companies and sovereign states (Painter et al, 2009). This brings us to the subject of formal and informal political influence.

Formal political influences refer to the process of a statutory structure of government and publicly setup establishments and procedures (James, 2014). Formal political influence can take the form of; political parties structures, public policy etc (James, 2014). A lot of people are of the opinion that formal political influence have no direct influence over them but still affects their daily lives in one way or the other (James, 2014).

On the other hand, informal politics is the establishing of alliances, conveying power and defending specific notions or objectives (Painter et al, 2009). This can also be considered as anything influencing ones daily life; everyday politics.

Politics in Nigeria have been largely defined by the amalgamation of the northern and southern province by the colonial masters (Davis et al 2001). The amalgamation saw the unifying of two regions that are vastly different in their religious, cultural, ecological and social affiliations (Davis et al 2001). The south was predominantly Christians who at the time had no strong monarchy system and were mainly traders and bureaucrats who learnt a lot formal western education from the Christian missionaries. The north on the other hand, are predominantly Muslims who at the time of colonialism had

strong monarch system and formal education was rare in the region; most of the northerners were farmers (Danjibo et al, 2009). While the south wanted independence from Britain, the north was not keen on it due to fears that due to the low number of educated citizens from the northern part of Nigeria. The fear was not to get independence from British officials but then still dependent on southern Nigerians who were certain to run the country post-colonialism due to their level of education (Danjibo et al, 2009). This resulted to politics of dominance and subordination between the north and the south of Nigeria, which has lingered on till date (Danjibo et al, 2009). However, this study will not go into details on the politics of Nigeria but will examine the impact it has on implementation of LIPs.

In the context of this study, political influences are those impacts on the projects that come as a result of persons or organisations power to sway or affect based on prestige, wealth, ability or position (James, 2014). These could be in the shape of:

1. Government regulations and policies,
2. Political interference on decision making process due to “vested” interest
3. Informal political influence or “everyday politics” in Nigeria

Although project management set up frameworks to counter such powers; for example project governance, it is very difficult to completely control the political influences that surround projects (Banerjee et al 2007).

According to Banerjee et al (2007):

*“From this political point of view, the art of project management lies in the capacity to create a project that arises out of the different interests of the stakeholders involved. Negotiating and finding a compromise between these interests should be seen as part of the project initiating stage.”*

Thus, from the comment, there is an indication that handling political interests and influences is part of the process of managing a successful

project but it cannot be controlled by project management techniques/tools as the management process focuses on the output of the objectives and plan of the project rather than negotiation of stakeholders interest or government regulations. Hence, we can deduce from the comment that the impact of political influences can be reduced or managed in the project in such a way that it has minimal impact on the projects outcome, in terms of meeting estimations/specifications, as well as adhering to common project management practices.

#### ***2.3.6.1.1      Brief insight on impact of political influences on projects with Nigeria as example***

Public sector projects are often left uncompleted or delivered to a poor quality (World Bank, 2004). This under performance of projects to their original estimation and specifications has shown an association with political influences. For instance evidences in Nigeria public sector suggest that projects implemented in constituencies where there is high level of political competition amongst the project stakeholders tends to perform better than those in lesser competition amongst project stakeholders constituencies (World Bank, 2007). This could imply that areas where stakeholders oppose one another tend to have better discipline in implementing projects due to high monitoring levels as against areas where all stakeholders in the project agree.

In order to identify how the political influences can be controlled, the use of project management frameworks designed to control the impact of external influences on projects; such as the project governance will be examined in chapter three, section 3.3.1. Project governance is developed to reduce or eliminate the impact of external factors to projects such as political influences and ensure that people are held accountable for delivering different parts of the project.

#### ***2.3.6.2      Economic influence***

Economic influences on projects are those factors that could positively or negatively impact on the outcome of a project as a result of them trying to

meet project ends using scarce means (The News, 2000). These influences usually arise from:

- Changing economic conditions affecting the availability of materials, equipment and resources
- Inflation due to boosted market competition, reduced consumption, supply chain variations, fluctuating exchange rate or changes in selling price of the product due to regulations
- Availability of civil infrastructure.

The adverse impact that the project faces as a result of these economic influences are usually not controlled or minimized via use of project management methods or well planned and estimated project plan or modern estimation tools/techniques (Masayuki and Ivohasina 2005). However, in situations where the planning or initial feasibility and scoping is not done properly, the impact of the economic influences could have strong adverse impact on projects (Golderg and Kolstad 1994).

#### *2.3.6.2.1 Brief insight on impact of economic influence on projects with Nigeria as example*

In Nigeria, Golderg and Kolstad (1994) suggest that there is a very volatile change in the market. Golderg and Kolstad (1994) suggest that the price of products change rapidly due to unstable exchange rates, poor supply chain process, poor regulation of price in the country and overly high dependency of the economy on a single export product, crude oil. The lack of steady supply of electricity in the country has resulted in manufacturers departing the country due to the need to generate their own electricity, which makes their products uncompetitive in the market (NCC, 2006). Hence, in most large infrastructure projects, products needed for implementation of the projects are imported regardless of the rapidly changing exchange rates.

The implication of this is that projects managed in Nigeria will either have very large contingency fund or find other ways to contain any unexpected fluctuations that differ from originally estimated. Bekker et al (2008) suggest that methods such as good project governance could be adequate in

eliminating or reducing the adverse impact of economic influences on projects.

#### 2.3.6.3 Socio-Cultural influences

In this section, the culture of Nigeria will be examined to identify its position in the Hofstede Cultural Dimensions without going into much detail about the management of culture. This is because this study focuses on identifying the influence of culture on the outcome of LIPs rather than exploring every aspect of culture.

Firstly, culture can be defined as “the inherited values, concepts, and ways of living which are shared by people of the same social group” (Tagreed, 2012). Socio-cultural influences in the context of a project refer to those factors that could alter the outcome of the project as a result of the collective behaviour and approach to work of the various people involved in the project (*Ogunsina et al*, 2005). Cultural differences within a project can originate from different levels; national, organisational, occupational and gender levels. Thus, different groups of individuals from same sex, occupational background or even sections of the society may perceive things in different ways and have varying levels of tolerance (Tagreed, 2012).

Hofstede (2001) presents a model of cultural dimensions which has been generally credited for being useful in understanding cultural difference of nations. In the following bullet points, the Hofstede cultural dimensions will be used to analyse the culture of Nigeria to better understand how this may impact the implementation of LIPs in Nigeria.

- **Power Distance Index (PDI)**

"Power distance is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally." (Hofstede, 2001)

Nations or societies where the culture has a low PDI expect and accept a democratic power relationship. On the other hand, in those cultures with higher PDI the people expect and accept hierarchies in

which every person has a classification even without the need for rationalization (Hofstede, 2001).

Nigeria can be considered as generally having a high PDI; this is mainly as a result of the fundamentals that make up the three major tribes/cultures in Nigeria. Nigeria has three major tribes; Igbo, Hausa and Yoruba. The Igbo culture for example endorses the “Osu” caste system. The “Osu” caste system forbids any relationships or interaction between the normal members of the society and the Osus, which are group of people dedicated to serve the Igbo gods hence deemed properties of the gods. This label of Osu to some members of the society still exist till date and puts a big stigma on the select group when it comes to their social status in the Igbo society. The Igbo people do accept this culture without asking for any justification (Udeani 2007). The Hausa and Yoruba believe in the younger and lesser-positioned people in society showing an unquestioning loyalty to the older and those in authority. This also follows a similar trend as the Igbo culture in expecting and accepting without need for justification that everyone has a place in society (Salamone, 2010).

Hofstede (2001) suggests that PDI is usually high in Latin and Asian countries, African countries and the Arab nations. This is in line with is obtainable from the three major cultures in Nigeria.

- **Individualism (IDV) vs Collectivism**

In individualistic cultures, there is much emphasis on individual attainments and rights. Hence, individuals are likely to stand up for themselves and their immediate/extended families. On the other hand, in collectivist cultures, people act mainly as members of an enduring and unified group or nation (Hofstede 2001).

Nigeria largely falls into the individualistic cultural group. Over thirty years of military dictatorship left most citizens of Nigeria in abject poverty, low literacy levels and low life expectancy levels. This state of disarray and hopelessness have developed a culture of “survival of the fittest” in the country, thus leaving the country as an aggregation of individuals, tribes, families and religious groups rather than a

unified nation with collective interest (Jemibewon 1998). This is in contrast to what Hofstede proposes about African countries having strong collectivist values; though this may be applicable to other African countries that have different circumstance from Nigeria.

- **Masculinity**

Masculine societies have ideals such as; competitiveness, forcefulness, acquisitiveness, ambition and control, while feminine societies place more emphasis quality of life and interactions. This implies that masculine cultures focus more on gender roles being clearly defined while feminine cultures places men and women at the same level and emphases on modesty and caring (Hofstede 2001).

Nigeria can be categorised as a masculine society because of the impact of the years of military dictatorship and civil war which divided the country and created political tension between the regions and groups (Jemibewon 1998).

- **Uncertainty Avoidance (UA)**

This is the representation of the extent to which members of a society tend to manage nervousness by reducing uncertainty. Individuals in societies with high uncertainty avoidance are inclined to show more emotion. They try to reduce the rate of unknown and unfamiliar situations and continue with step-by-step planning to effect a change by following rules. However, low uncertainty avoidance societies are more accepting and comfortable in unstructured or unpredictable situations and tend to have as few rules as possible. Individuals from such societies try to be more practical and willing to tolerant change (Hofstede 2001).

Nigeria's three major tribes show different levels of UA. The Igbo and Yoruba tribe tend to have high UA while the Hausa tribes tend to have low UA (Udeani 2007).



- **Long Term Orientation (LTO)**

This represents the extent to which cultures maintain links with their past while dealing with challenges from the present and the future (Hofstede 2001). Cultures that score low on this dimension (Normative) tend to maintain strong affiliation with their traditions and norms while those that score high tend to be more welcoming to modern learning and continuous improvement. (Pragmatic).

The Nigerian society is largely normative with respect to the LTO dimension. For example, this can be seen in the practice of traditional PM techniques across the country (CBN, 2006).

These cultural influences/factors have direct impact on the various tasks set in the project and how well they will be implemented (*Ogunsina et al*, 2005). Thus it is essential that they be taken into consideration in order to ensure that the project is successfully delivered. However, project management techniques do not make provisions for different cultures and accommodation of different skill levels or impact living standards (CBN, 2006). Therefore, socio-cultural factors may pose challenges to the success of a project if they are not properly controlled. Besides, Bekker et al (2008) suggests that project governance could provide solution to the challenges of project external factors, which socio-cultural influence is one of them; this will be further explored in chapter three.

#### ***2.3.6.3.1 Brief insight on impact of cultures on projects with Nigeria culture as example***

In Nigeria, there is a low awareness about modern project management techniques and their importance (CBN, 2006). The implication of this is that people who are involved in projects often lack the right level of skills, professionalism and knowledge necessary to manage projects effectively. This is seen in the high rate of international experts recruited in large capital projects in Nigeria (Obasanjo, 2004); a clear indication that LIPs are impacted by the low Long Term Orientation cultural dimension.

Furthermore, cultural factors such as societal pressure to show affluence, autocracy amongst those in authority, being above the law as an indication of

superiority and members of family placing any family related interest above all other interest; including work tasks; are common in Nigeria (CBN, 2006). These can be attributed to the masculinity and individualism of the Nigeria societies. Therefore, these cultural factors will be examined in more details in this research to identify their impact on the outcome of LIPs in Nigeria.

Obasanjo (2004) suggests that lack of professionalism and proper consultation in the implementation of projects in Nigeria was the major cause of high rate of project delays in the country. This can be attributed to Nigeria's high PDI, masculinity and Individuality cultural dimensions. Thus, this suggests that there is a strong impact from cultural related influence on management of LIPs in Nigeria; a point to be investigated in this research.

#### **2.3.6.4 Technological influence**

In project management, the influence of technology has become an integral part of coordinating the project team, managing projects deliverables, risks, milestones and stakeholders (Farroukh, 2006). Communications technology as well as PM design tools, equipment, and techniques are very much in common use in most projects implemented in developed economies and influences the level of control and monitoring attained in most projects (Omo-Ettu, 2012).

However, the use of technology is not a set standard for implementing all projects. Thus, project management does not have control over what technology that must be used. The implication of this is that different projects can use different levels of technology ranging from none to several (Omo-Ettu, 2012). The adverse impact of not having good technological influence in projects may include:

- Poor design standards
- Poor communication and stakeholder engagement
- Supply chain related delays due to poor transport and other civil infrastructures such as ports, power, roads, railways and telecommunication

#### **2.3.6.4.1      *Brief insight on impact of technological influence on projects with Nigeria as example***

The unavailability/non-utilisation of PM resources and tools in Nigeria has been said to be detrimental to the successful delivery of large capital projects to their original objectives and specifications (Frimpong et al 2003). Also, the of lack suitable resources, technical and managerial skills is common in projects implemented in Nigeria (Frimpong et al 2003). Therefore, adverse impact of not using necessary technological influences in projects could be expected to be frequent.

### **2.3.7 Stakeholders Management**

A stakeholder is anybody who can affect or is affected by an organisation, strategy or project (Eden et al 2011). They can be internal or external and they can be at senior or junior levels. Some definitions suggest that stakeholders are those who have the power to impact an organisation or project in some way. For example:

*'People or small groups with the power to respond to, negotiate with, and change the strategic future of the organization' (Eden et al 2011).*

Stakeholder management is a serious part to the effective delivery of any project. In a project, the stakeholders are those individuals, groups or organisations that can affect, be affected by, or considers them to be affected by the project.

#### **Stakeholder engagement**

According to Aliza et al (2011), stakeholder engagement involves the:

*“Formal and informal ways of staying connected to the parties who have an actual or potential interest in or effect on the business. Engagement implies understanding their views and taking them into consideration, being accountable to them when accountability is called for, and using the information gleaned from them to drive innovation.”*

Thus, without adequate stakeholders' engagement the performance of the project can be negatively affected.

## 2.4 How well are LIPs managed in developing economies?

	Major causes				
	1	2	3	4	5
Vietnam (This study, 2007) (1)	Poor site management and supervision	Poor project management assistance	Financial difficulties of owner	Financial difficulties of contractor	Design changes
Malaysia (Sambasivan, 2007) (2)	Improper planning	Site management	Inadequate contractor experience	Finance and payments of completed work	Subcontractors
South Korea (Acharya et al., 2006) (2)	Public interruptions	Changed site conditions	Failure to provide site	Unrealistic time estimation	Design errors
Hong Kong (Lo, 2006) (2)	Inadequate resources due to contractor/lack of capital	Unforeseen ground conditions	Exceptionally low bids	Inexperienced contractor	Works in conflict with existing utilities
UAE (Faridi, 2006) (2)	Preparation and approval of drawings	Inadequate early planning of the project	Slowness of the owner's decision-making process	Shortage of manpower	Poor supervision and poor site management
Jordan (Sweis, 2007) (2)	Financial difficulties faced by the contractor	Too many change orders from owner	Poor planning and scheduling of the project by the contractor	Presence of unskilled labor	Shortage of technical professionals in the contractor's organization
Kuwait (Koushki, 2005) (2)	Change orders	Financial constraints	Owner's lack of experience	Materials	Weather
(3)	Contractor	Materials	Financial constraints	Change orders	Weather
Ghana (Frimpong, 2003) (1)	Monthly payment difficulties	Poor contract management	Material procurement	Inflation	Contractor's financial difficulties
Nigeria (Aibinu, 2006) (2)	Contractors' financial difficulties	Clients' cash flow problem	Architects' incomplete drawing	Subcontractor's slow mobilization	Equipment breakdown and maintenance problem

(1): Delay and cost overruns; (2): Delay only; (3): Cost overrun only

**Table 2.1:** Comparing the major causes of LIP poor performance in various developing economies (Nguyen et al 2004)

From table 2.1; ranking of causes in various developing economies; we can see that in Vietnam poor supervision and site management ranked number one whilst financial difficulties with the owner and contractor ranked three and four. In Ghana, Nigeria, Hong Kong and Jordan financial related causes are ranked number one. Planning related issues such as design, change order and general project planning were ranked number one in Malaysia, UAE and Kuwait (Acharya et al 2006; Luu et al 2008; Faridi et al 2006; Sweis et al 2007; Koushki et al 2005; Frimpong et al 2003; Aibinu et al 2006). The top five causative factors in each of these countries are all similar, but ranked differently in each country based on the frequency and impact they have on LIP performance in that country; this suggests that the frequency and impact of these causative factors are subject to other influences such as their cultural, social, political and economic environment.

For instance, in Nigeria there are no development banks dedicated to supporting projects thus contractors financial difficulties ranking number one

can be understood as local contractors struggling to handle the cost of a LIP. But this should be the job of the project steering committee to identify a competent contractor before awarding the contract in the first place, therefore linking the root cause, to poor project management practices at the initiating and planning stage of the project. Another example is in Kuwait; change order ranked number one and this could be associated to decision making culture thus the root cause pointing towards external influences on the project. Hence, there are other causes that can be seen to be leading to the causes of failure as identified in Nguyen et al (2004). The common poor performances seen in LIP management in developing economies will be examined under the five stages of project management lifecycle to identify their root causes (PMBok Guide, 2005).

1. Start-up/initiating stage
2. Planning stage
3. Executing and controlling stage
4. Closing stage

**Note:** Some project management professional bodies consider the stages to be five; executing and controlling stage standing separately; but due to these two stages being greatly associated they will be classed as one stage in this study.

#### **2.4.1 Start-up/Initiation stage**

At the initiation or start-up stage; as different authors may called; of a LIP lifecycle, the initial idea should be evaluated to identify if it is viable and in line with other projects that define the strategy of the organisation or owner of the LIP. The scope, cost and duration of the project is also defined and feasibility study carried-out to weight the cost of the project against the benefits it should bring. An analysis is carried-out to identify measurable project goals and identify project stakeholders; such as beneficiaries and support personnel. Also the project deliverables; expectations of stakeholders; must be clearly understood and defined at this stage. Finally the project controls are defined at this stage. A poor performance of the

functions of this stage means that the project will be going in the wrong direction at later stages of the project.

For instance, contractor financial difficulties are identified as the top ranking; most common and most impacting; cause of poor performance of LIPs in Nigeria, Jordan and Hong Kong (Aibinu et al 2006). This suggest either that a poor assessment of contractors financial ability could have been done at the initiating stage or that the cost estimations were wrong or that unforeseen circumstances changed the project scope thus contractor run into delays in approval of funds (Aibinu et al 2006). It could also mean that the contractor may have intentionally underestimated the project cost or strategically misinterpreted the estimation, to win the project bid (Flyvbjerg et al 2005a). It could also be that a poor cost-benefit analysis of the project was carried-out due to evaluation of proposals driven by initial price rather than long-term value for money (Aibinu et al 2006). Hence, this establishes a link between the financial difficulties of contractors to one of the eight root causes of project failure as recommended by the National Audit Office and the Office of Government Commerce United Kingdom - (see table 2.2). Any of the causes listed in table 2.2 can occur in a project as a result of lack or ineffective control, directing and monitoring of the project lifecycle.

Furthermore, it can be seen that none adherence to the required functions that must be completed at a project stage can affect the performance of the project in later stages. LIPs in developing economies proceed to the planning stage without clarifying the true benefits of the project and the strategic advantage of choosing to embark on the LIP (Aibinu et al 2006). Instead, the choice of LIPs to embark on is largely due to political, social and economic interests (Aibinu et al 2006). This suggests that even though the guideline on applying this stage of the project life cycle identifies guides that will best help the progress and performance of a project, the guides are not always adhered to. This may be caused as a result of no one person; the project manager; being held accountable at this stage for ensuring that the guidelines are adhered to or that other interests overshadow this stage or both.

Stages of PM	Root cause	Associated project management issues
<b>Initiation</b>	<p>Core</p> <ul style="list-style-type: none"> <li>Gap in expectations definition</li> <li>Lack of clear links between the project and the organisation's key strategic priorities, including agreed measures of success.</li> <li>Evaluation of proposals driven by initial price, rather than long-term value for money.</li> </ul> <p>Facilitating:</p> <ul style="list-style-type: none"> <li>Poor feasibility study</li> </ul>	<ul style="list-style-type: none"> <li>Not hiring appropriate skilled personal on the project</li> <li>Financial difficulties for contractors</li> </ul>
<b>Planning</b>	<p>Core</p> <ul style="list-style-type: none"> <li>Inadequate resource planning</li> <li>Inadequate cost, time and scope definition and estimation</li> <li>Unclear Project Activity sequencing</li> <li>Lack of clear senior management and, ministerial ownership and leadership in government projects.</li> <li>Too little attention to breaking down development and implementation into manageable steps.</li> </ul> <p>Facilitating</p> <ul style="list-style-type: none"> <li>Inadequate quality, communications, team task, solicitor, risk and procurement evaluation and planning</li> </ul>	<ul style="list-style-type: none"> <li>Having many rework and deficiencies during infrastructure</li> <li>Changes in government or company policy</li> <li>Poor technical ability and service level of the contractor</li> <li>Contractors always finding easy/cheaper alternative solutions. Hence, making use of cheaper materials.</li> <li>Inaccurate estimation</li> <li>Poor quality of design and insufficient details to project</li> <li>Poor people management</li> <li>Poor contractual arrangement and legal issues</li> </ul>
<b>Executing and Controlling</b>	<p>Core</p> <ul style="list-style-type: none"> <li>Inadequate information distribution</li> <li>Inadequate scope verification</li> <li>Inadequate contract administration</li> <li>Inadequate performance reporting</li> <li>Management</li> <li>Lack of effective project team integration between clients, the supplier team and the supply chain</li> </ul> <p>Facilitating:</p> <ul style="list-style-type: none"> <li>Inadequate scope change control</li> <li>Inadequate schedule control</li> <li>Inadequate cost and quality control</li> </ul>	<ul style="list-style-type: none"> <li>Economic issues such as inflation</li> <li>Corruption</li> <li>Delays due to change order</li> <li>Adverse relationship and mistrust between contract team</li> <li>Inadequate contractor experience</li> <li>Poor contract management</li> <li>Weather</li> <li>Breakdown of equipment</li> <li>Poor supervision</li> <li>Work with in conflict with existing utilities</li> <li>Public interruption</li> <li>Poor site management</li> <li>Shortage of technical professionals</li> </ul>
<b>Closing</b>	<ul style="list-style-type: none"> <li>Contract not close-out when project is no longer justifiable</li> <li>No administrative closure to projects</li> </ul>	<ul style="list-style-type: none"> <li>Uncompleted projects</li> <li>Improper project closure</li> </ul>

**Table 2.2: Causes of failure and associated issues in projects (from reviews)**



Reports by Chan and Kumaraswamy (1996), Aibinu et al (2006), Arditi et al (1985), Cusworth et al (1993), all suggest that in most LIP management in developing economies, both of the above suggested causes apply. So, it is clear that a method that ensures that, all the project participants adhere to the stipulations of the project methodology/technique being used in a project is missing.

#### **2.4.2 Planning stage**

Planning in LIPs can be very complex due to the size and completion time of LIPs (Cusworth, et al 1993). Thus the task of making resources estimations and forecast of activities for LIP is more difficult than in a small or medium size project (see Arditi et al 1985; Ahmed et al 2003). This means that this stage of the project holds the potential to make or break the project in terms of measuring its performance.

The planning stage follows the initiation stage; this stage provides more details to a level suitable for guiding the project through its implementation without its deliverables being at risk (PMBok Guide, 2000). The outcomes of this stage are approved plans for key areas of the project such as; scope, cost, time and resources needed to ensure effective implementation of the project to expectation (PMBok Guide, 2000). The planning stage should involve the project manager, project team, stakeholders of the project, project owner, project sponsor, consultants and possibly suppliers in order to complete its functions and activities properly (PMBok Guide, 2000). As identifying and detailing the network of activities for the project in a rational manner is the key function of this stage, insufficient or unclear plan can lead to changes and conflict in the project implantation.

The question is what are the root causes of improper planning? In developing economies; change order, architects incomplete drawing, design error, equipment breakdown and improper planning are identified among the top five ranked causes of LIP poor performance and all of them could have been avoided with a better planning. Besides, several factors such as lack of LIP management experience, estimation skills and knowledge about the

corporate environment of an LIP can negatively affect the outcomes of this stage (Aibinu et al 2006; Arditi et al 1985; Cusworth et al 1993; Dlakwa et al 1990; Frimpong et al 2003 and Assaf et al 2006).

For example, in the ground water project in Ghana, Frimpong et al (2003), suggest that monthly payment difficulties from agencies, delays in material procurement, poor contractor management and escalation of material prices were some of the root causes of the delays in the project. In this case, a relationship can be seen between these listed causes and the experience and skills of the planner in this project. This relationship depicts poor knowledge of the market behavior and supply chain in Ghana. Also the monthly payment issue was said to be due to delay in the approval of additional funds to cover the escalations in price of material, hence still linking to the same root planning inexperience.

Furthermore, Al-Momani (2000) argues that an almost total negligence of users/owners' satisfaction when projects are planned contribute strongly to the poor performance of LIPs in developing economies. Al-Momani (2000) suggests that factors such as gap in communication between contractors and project owners' was a more pressing issue than cost overrun and delays in Jordan and most developing countries. The point being that, even in some cases where the project had enough funding and was completed on time, the quality of the finished project failed to satisfy the expectation. Hence poor communication can be a major contributor to the poor performance of LIPs.

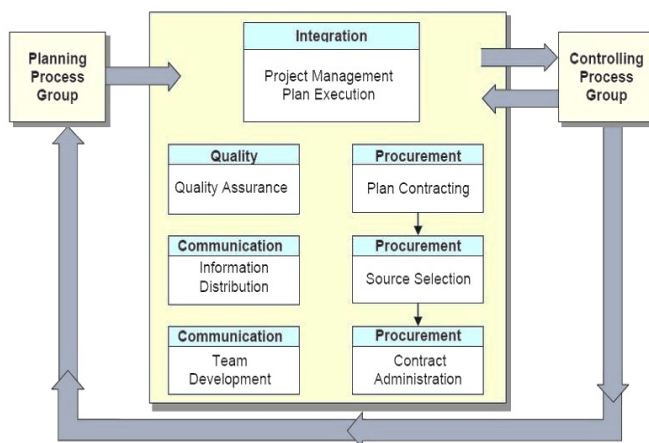
The major causes of project failure or poor performance associated with this stage according to Flyvbjerg (2005a) includes; optimism bias, inaccurate estimation and strategic misinterpretation. He argues that high level of misinformation in the planning of large infrastructure projects leads to failure of these projects meeting their original estimations and specification. Estimation in LIPs is usually dominated very positivist or optimistic methods and techniques, hence, overlooking the environmental factors that are associated with the supply chain (Flyvbjerg et al 2003; Flyvbjerg et al 2002; Flyvbjerg 2005a).

In conclusion, the root causes of failure in the planning stage are communication gaps, optimism bias, strategic misinterpretation and inaccurate estimation due to inexperience and poor estimation skills. A better monitoring and controlling of the functions in this stage can eliminate all of these causes. Therefore, there is need to ensure this if an LIP is expected to perform well.

### 2.4.3 Executing and controlling stage

The executing process involves a higher level of effort by every party involved in the project. The project plan is the input to this process, which forms the core. The tools and techniques are as provided in the project plan while the output should be a completed project.

The controlling process takes into consideration that the planning may not account for emerging situations thus the project is monitored in this process and when the execution does not go according to plan or change is needed it is taken care of in this process. This process involves some planning as well. The input is the control plan and the output is a performance control report.



**Figure 2.1: Executing stage of a project (APM 2005)**



**Figure 2.2: Monitoring and controlling the project (APM 2005)**

In developing countries, the management of LIPs is perceived to suffer most at the executing and control stage as this is the stage where most LIPs are either abandoned or suffer delays, cost overruns and scope changes; these are the criterion for judging project performance. In other words, this stage can be considered as the most crucial stage of the project.

The APM (2005) publication specifies that the executing stage of a project involves very high levels of activities by all project participants. It goes on to mention that the input to this stage is the project plan, which forms the core of this stage. The project plan provides the techniques, tools and procedures for completing this stage, while the output is the completed project. A key component of this stage is the project controlling and monitoring process (APM 2005). This process takes into consideration emerging situations that the project may not have planned for. The controlling and monitoring process manages the project risks, changes and other factors that may stop the project from going according to plan (PMBOK 2004). The control and monitoring process serves as a connecting loop, between the executing stage and the planning stage, its input is the control plan and the output is the performance control report (see figure 2.1 and 2.2).

During the executing stage emerging situations could prompt for a change in the project scope and subsequently additional funds and even extension of planned duration. These changes could be design modifications, unforeseen site conditions, unforeseen supply chain changes, scarcity of materials, removal of funds and impacts from third parties amongst others. These changes are normal and even expected in most LIPs and the process of implementing and controlling the impact of these changes is called change management. A situation where an inadequate management of change and risk occurs during this stage the project then suffers overruns and in some cases abandonment this is because when changes are introduced the monitoring and control process should reassess the viability of the project before changes are approved (Aibinu et al 2006). The cost and benefit analysis should normally come into consideration here to justify the investment in the project.

In table 2.1 the causes of poor performances, in developing economies, such as: change orders, inadequate contractor experience, poor contract management, weather, incomplete drawing from architect, breakdown of equipment, poor supervision, works in conflict with existing utilities, public interruption, poor site management and shortage of technical professionals

are all causes that occur during this stage of the project. However the root causes of these are failure in performing the project management function associated with this stage, for example in Koushki et al (2005) suggested that change orders contributed immensely to the poor performance of projects in Kuwait. If the right level of change control from the change plan is implemented, as well as an effective engagement of stakeholders, the effecting of change during this stage will be faster. Also in UAE, Faridi et al (2006) mentioned that slowness in the decision process was a key issue in projects. This issue should have been eliminated with a more effective engagement of stakeholders in monitoring and controlling project changes. In effect poor performance at this stage can be arguably associated to non-adherence to the project management recommended practices at this stage or from the planning and initiating stage. Therefore to ensure that the issues associated with this stage are avoided in a project it is important that there is clarity on the practices and there is good overall project directing from the project steering committee.

#### 2.4.4 Closing stage

The closing processes involve inspections to ensure that the project deliverables are met, administrative closure and project team disbanded.

This stage involves:

- **Project close:** Finalize all activities across all of the process groups to formally close the project or a project phase
- **Contract closure:** Complete and settle each contract (including the resolution of any open items) and close each contract applicable to the project or project phase.

This stage is not always done properly as can be seen from the number of uncompleted projects in Nigeria that have been ongoing for decades (Nigerian Presidential report 2012). This issue of uncompleted projects is associated to corruption and change in policies, which in effect links to improper project closure when the project is no longer justified, by a new

administration as the root cause. Thus, there is need to provide a better project directing and control to the function of this stage.

<b>Project stages</b>	<b>Common management practices</b>	<b>Codes</b>
<b>Initiation</b>	Core <ul style="list-style-type: none"> <li>• Expectations Definition</li> <li>• Scope and Resource Estimation</li> <li>• Project justification</li> </ul> Facilitating: <ul style="list-style-type: none"> <li>• Feasibility Study</li> </ul>	Core <ul style="list-style-type: none"> <li>• I1</li> <li>• I2</li> <li>• I3</li> </ul> Facilitating: <ul style="list-style-type: none"> <li>• I4</li> </ul>
<b>Planning</b>	Core <ul style="list-style-type: none"> <li>• Scope planning</li> <li>• Scope Definition</li> <li>• Activity Definition</li> <li>• Activity Sequencing</li> <li>• Resource Planning</li> <li>• Activity Duration Estimating</li> <li>• Schedule Development</li> <li>• Cost Estimating</li> <li>• Cost Budgeting</li> <li>• Project Plan Development</li> </ul> Facilitating <ul style="list-style-type: none"> <li>• Quality Planning</li> <li>• Communications Planning</li> <li>• Risk Identification</li> <li>• Risk Quantification</li> <li>• Risk Response Development</li> <li>• Organisational Planning</li> <li>• Staff Acquisition</li> <li>• Procurement Planning</li> <li>• Solicitation Planning</li> </ul>	Core <ul style="list-style-type: none"> <li>• P1</li> <li>• P2</li> <li>• P3</li> <li>• P4</li> <li>• P5</li> <li>• P6</li> <li>• P7</li> <li>• P8</li> <li>• P9</li> <li>• P10</li> </ul> Facilitating <ul style="list-style-type: none"> <li>• P11</li> <li>• P12</li> <li>• P13</li> <li>• P14</li> <li>• P15</li> <li>• P16</li> <li>• P17</li> <li>• P18</li> <li>• P19</li> </ul>
<b>Executing and Controlling</b>	Core <ul style="list-style-type: none"> <li>• Information Distribution</li> <li>• Team development</li> <li>• Quality Assurance</li> <li>• Scope Verification</li> <li>• Solicitation</li> <li>• Source Selection</li> <li>• Contract Administration</li> <li>• Performance Reporting</li> <li>• Overall Change Control</li> </ul> Facilitating: <ul style="list-style-type: none"> <li>• Scope Change Control</li> <li>• Schedule Control</li> <li>• Cost Control</li> <li>• Quality Control</li> <li>• Risk response Control</li> </ul>	Core <ul style="list-style-type: none"> <li>• E&amp;C1</li> <li>• E&amp;C2</li> <li>• E&amp;C3</li> <li>• E&amp;C4</li> <li>• E&amp;C5</li> <li>• E&amp;C6</li> <li>• E&amp;C7</li> <li>• E&amp;C8</li> </ul> Facilitating <ul style="list-style-type: none"> <li>• E&amp;C9</li> <li>• E&amp;C10</li> <li>• E&amp;C11</li> <li>• E&amp;C12</li> <li>• E&amp;C13</li> </ul>
<b>Closing</b>	<ul style="list-style-type: none"> <li>• Contract close-out</li> <li>• Administrative Closure</li> </ul>	<ul style="list-style-type: none"> <li>• C1</li> <li>• C2</li> </ul>

**Table 2.3: Project stages and their respective activities (APM 2005)**

Finally, it is unlikely that the people in authority cannot identify ways to stop all of the causes of poor performance of LIP associated with the planning

stage as the management of project has taken place for decades and have been extensively researched. It is more likely that these causes are being ignored because they create chaos in the process which is beneficial to some (Bekker et al, 2008). Therefore, it is clear that a system that monitors, control and direct LIPs in a way that the root causes are avoided is missing. In the next section, we will investigate the root causes of poor performances in LIPs can be eliminated or reduced.

## **2.5 What is the way forward in eliminating or reducing failure in LIPs managed in developing economies?**

Flyvbjerg et al (2003) suggests in his report "What Causes Cost Overrun in Transport Infrastructure Projects?" that many transportation LIP's across five continents of the globe suffer cost or time overruns. His research covered both developing and developed economies. This suggests that regardless of the economic region of the globe, LIP do fail - even though the rate and intensity may differ. Furthermore, reports by Bekker et al (2008) suggest that numerous project management techniques have been developed from extensive research in the area. Therefore, it is relevant to investigate the reason why LIPs fail regardless of numerous project management techniques and solutions.

Several researchers have investigated and written reports about the causes of poor performances in LIPs with much of their arguments focusing around all the other stages of a project life cycle and little on the planning stage. Bent Flyvbjerg et al (2005) suggested that the root causes of poor performances seen in LIP are largely due to issues at the initiation and planning stage whilst the other issues that arise are as a subsequence of them. However, planning for LIP is a complex task as most of the plans are made based on estimation which may or may not be accurate depending on unforeseen conditions that the LIP may encounter as it progresses. Besides, there are numerous project management methodologies developed over the years with various functionalities that should address the causes of poor performances. Could it be that the techniques are not being applied properly? Or that they techniques do not address the root causes of poor performance in LIP? It cannot be that all the past researchers and experts are incapable of identifying ways that can effectively tackle the issues. This leaves one to consider reviewing existing methodologies, frameworks and techniques in order to identify why they fail to effectively improve the performance of LIPs.

The vast number of project management techniques, tools and methodologies available makes it almost impossible for projects to be managed identically as project managers are likely to use what they are



familiar with and/or are presented with by the organisation; thus, the poor performance of projects to can be linked to the choice of techniques, tools and methodologies to be used as they may function suitably in some environments and poorly in others.

### **2.5.1 Review of common project management methodologies, techniques and tools**

This subsection will review the commonly used methodologies and techniques in LIP management. The following project management techniques and methodologies were identified from reviewing of results of a search for “project management techniques and methodology” using the Google search engine:

#### **Methodologies**

1. Waterfall: PProjects IN Controlled Environments 2. (PRINCE2)
1. Agile: Adaptive

#### **Techniques**

2. Six Sigma
3. Critical Chain Project Management (CCPM)
4. Critical Path Method (CPM) and
5. Program Evaluation Review Techniques (PERT)
6. A Guide to the Project Management Body of Knowledge from the Project Management Institute (PMI)
7. Association for Project Management Body of Knowledge (APMBoK)
8. Stage-Gate Models

#### **Tools**

1. Work Breakdown Structure (WBS)
2. Lean Methodology
3. Earned Value Management (EVM)
4. SAP ERP
5. MS Project
6. Primavera P6

Some of the techniques and methodologies will be reviewed with respect to how the tackle each of the stages of a project lifecycle. There are five processes identified by the guideline in the completion of the project, which includes: initiating, planning, executing, monitoring and control and closing.

PMBOK stands for Project Management Body of Knowledge. It was created in order to standardise generally accepted practices and information in project management. The PMBOK guide lays out standards that are supposed to be practised in good project management. The processes in the guide are described in three aspects: input tools and techniques and outputs. PMBOK guide commands a large followership, in the project management field, due to its structured process orientation that indicates what is needed to manage the project from start to finish. It usually helps starters to develop good project management skills and ensures preservation of the assets of an organisation that uses it.

However it is too complex to use in smaller scale projects and needs adaptation in various industries, where it is being used, according to project scope, time, budget and time constraints.

APMBOK stands for Association for Project Management Book of Knowledge. It aims to develop and promote good professionalism in project management. The APM is based in the UK but promotes similar standards as the PMBOK. However the APMBOK does not offer any specific methods or in depth template for managing projects, it only provides understanding on different project management topics, especially stakeholder and communication management, teamwork, conflict management and negotiations. It is more useful in organisations where there is an already established method of project management.

The outcome of each stage feeds into a gate for evaluation of quality and deliverables before progress to next stage. This evaluation process at the gates involves several decisions making amongst project stakeholders and some personnel involved in the project implementation. At the gates decisions for project to progress to next stage based on accomplishment of

required deliverables are made. However, any misinformation at the gates could lead to the project progressing to the final stage without meeting the necessary original specification. Hence the communications at the gates are very vital to the final outcome of the project. The discussions on this model will focus on the gates as they hold the bulk of communications and decisions that are made in the project.

At Gate 1, the project is conceived as an idea. This idea is given a quick evaluation and scoping to identify what it will entail; the project owners, consultants, estimators/suppliers and architects do this. This gate falls between the Discovery and Scoping stages.

At Gate 2, the estimated duration, scope and cost of the project has been drafted. These estimates are evaluated against the anticipated economic, social or/and other benefits to justify the usefulness for the project. This will involve the estimators/suppliers, consultants, architect(s), project owner(s), project manager and any other project stakeholders. This gate falls between the scoping and Build Business Case stage. Moreover the later stage consists of four sub stages which includes; Product Definition and Analysis, Building the Business Case, Building the Project Plan, and Feasibility Review. At Gate 3, the project is justified and the project design specifications, estimations etc. are developed in more details in preparation for the project implementation. This involves the estimators/suppliers, project engineers, consultants, project and site managers, second-tier suppliers and third-tier suppliers. This gate falls between Build Business Case and Development stages

At Gate 4, the implemented project is due for testing and validation. The validation process may involve the representative(s) of project owners and stakeholders approving the specifications and quality achieved by the suppliers, second and third tier suppliers, project manager, consultants and project engineers. This gate falls between Development and Testing and Validation stages. The later stage may involve three phases depending on the project. These phases include; Near Testing, Field Testing, and Market Testing.

At Gate 5, the project has passed through validation and is prepared for launch. This will involve again the project owners and stakeholders. Also involved are the project manager, project engineers and all tiers of suppliers. However the stage-gate model would only function if the processes themselves are monitored and controlled, otherwise in a project environment that has a lot of external influences on the management, it will be difficult to be applied. This has been often associated with the lack of understanding of how the stage-gate process can develop the decision-making in LIP, a business case analysis that is founded on biased information or does not contain the accurate variety of risks, or has weak gates that allow projects to continue without strong business justification or clear quality stage-gate deliverables.

Six-Sigma is a highly thorough process that is useful in enhancing the delivery of close to perfect services; Six-Sigma aims to identify and measure the number of defects in a process and establish systematic ways of removing them as completely as possible (Breyfogle et al 2003). The six core concepts in Six Sigma include:

1. Critical qualities to success; attributes that the customers value the most
2. Defect; aspects that fails to meet customers' expectations
3. Process capability; deliverables for each of the processes
4. Variation; customer's expectations in terms of ideas, feelings and point of view
5. Stable operations; insuring reputable, reliable and sustainable processes in delivering customer expectation
6. Design of six sigma; designing of a plan to meet process deliverables and needs

The advantages of six sigma is that it focuses on prevention rather than cure of problems, focuses on process improvement rather than process outcome, promotes organisations profitability and could possibly save cost over-runs, promotes maximum customer satisfaction and ensures every issue is removed as quick as it is identified (Eckes 2003). However it is time

consuming to implement, in some cases it can be rigid which kills creativity, and it encourages outsourcing of improvement process with lack of accountability (Eckes 2001). Breyfogle et al (2003) suggests that six sigma requires high level of skill to implement hence may not be suitable in a developing country where there is a lack of skilled labour. Cases where it is applied ineffectively due to lack of skilled labour, will tend to result in poor project performance. Therefore, it is the role of the project steering committee to monitor and control this to effectively direct the project to excellent performance.

In the case of PRINCE2 (PROjects IN Controlled Environment 2), the methodology has been criticised for its over detailed bureaucratic processes that makes it difficult to be strictly followed in most projects. PRINCE2 is a project management method approved by the government of the United Kingdom. The standards set by PRINCE2 are prerequisite for managing public projects in the UK. PRINCE2 is a process driven methodology, which has methods that are reactive and adaptive. The seven major principles of PRINCE2 include:

1. Continued business justification
2. Learning from experience
3. Defined roles and responsibilities
4. Managing of stages
5. Managing by exception
6. Focus on projects
7. Tailor to project environment

It also has seven themes:

1. Business case
2. Organisation
3. Quality
4. Plans
5. Risk
6. Change
7. Progress

And also seven processes give PRINCE2 the ability to fit into organisations of any size and support consistence in project management practices (PRINCE2). However, it takes a lot of effort and time to get an organisation to get used to it, as it's many terminologies can discourage those who are new to it (RDI 2009). Also it does not take into consideration stakeholder management or conflict management (Haughey 2009). The benefits of this methodology may be outweighed by these disadvantages especially in developing countries where there is often need for a simple but in depth methodology due to the skill level and numerous external influence on projects. Thus use of ineffective use of PRINCE2 could be a reason behind project poor performance.

The Critical Chain Project Management (CCPM) technique is used in planning projects with the emphasis being on resource requirements, in the implementation of the project. It is known for making projects schedule move between ten to fifteen per cent faster and less expensive than the most traditional methods (Standard Group Report – Choas 2000). It was developed in 1997 from numerous studies, by a Spanish group, which found that projects are usually over two hundred per cent longer than their planned duration, one hundred and nine per cent over their budget and seventy per cent of projects drift away from their original scope specifications whilst thirty per cent are cancelled before they reach conclusion (Goldratt 1997). However the research that found this system was based in the west so may not take into consideration what the issues are, in developing countries.

Critical Path Method (CPM) and Program Evaluation Review Techniques (PERT) are the traditional project schedule and management methods in the early 20<sup>th</sup> century, to satisfy the needs of large projects in the United States of American military and industries. According to Young (2008), there are six steps using these techniques:

1. Definition of project significant tasks and activities
2. Creation of relationships between the activities and prioritising of unnecessary activities
3. Create a map of each of the activities and how they connect to each other using dummy arrows

4. Estimate time and cost for each activity
5. Creating the critical path, which is the longest path through the mapping, of activities
6. Use the map to control, monitor and plan the project

So the key to this process is the critical path, which usually enhances the project, and it is given to the member of the team who is most qualified and responsible. The benefits of this method are that it can determine slack times and eliminate it (Weber 2005). The project manager will know the dates for each activity and evaluate what should be happening at each stage to be able to control the project and ensure that it is on schedule and in effect on cost. However this method is complicated as seen by many and even gets more complicated as the projects get larger. Weber (2005) suggests that to get the completion time of activities accurate is usually difficult as other factors in real life could emerge. He also proposed that the method has a disadvantage of not taking into account the allocation of resources and stakeholder management.

In the early 1960's, PERT was further developed to be able to monitor spending rate against planned progress but not on the stakeholder management. The WBS was also developed at this time for assisting in the control of project cost; this led to the development of the Earned Value Management system; but none of these techniques explored further on stakeholder management.

As the rate of research in the area of project management increased in the 1970's, many publications concluded that there is a need for larger project teams when handling Large and complex procurements projects; LIP. However, this further created the need for collaboration and integration of these teams to ensure that the LIP is delivered successfully.

Later project management technique such as the Lean Methodology is a method developed mostly from the philosophy of Toyota production systems. It focuses on reduction of resources and expenditure rather than the creation of value. It eliminates wastefulness and sees value as whatever the

customer is willing to pay for (Goldratt 1997). It is mainly used in the manufacturing sector but can be used in projects. The waste that Lean aims to remove includes: waste in transportation, time delays, over processing, over production, waste of resources during the process and defects in processes (Deming 1994). The only limitation to this method is that it is highly dependent on teamwork and will not work where team members do not show commitment and discipline. It also requires that decisions are stuck to rather than changes springing up in the middle of activities. These cannot allow it to function properly in large infrastructure projects, especially in developing countries, where there is frequency in changes of policy. There are many other methodologies that are used in large projects especially Information Technology projects, but they are not very much used in construction of utility infrastructure.

In summary these methodologies all fall short of effectively monitoring and controlling factors that arise from outside the implementation of a project; that is, factors external to the project such as stakeholders engagement and strategic alignment of project to overall business strategy. For example, PRINCE2 does not take provide detailed stakeholder management steps, which is crucial in large infrastructure projects; in effect there are no clear allocation of responsibilities and accountabilities for poor performances amongst steering committee members/project stakeholders, which gives room for irresponsible actions. PMBOK and AMPBOK provides the necessary steps for each stage in the project but does not take into account impact of none adherence to these steps to the project. Thus, can only be used where there is economic and political rationality; this is not the case in most developing countries as most times, project management practices are effected by several economic, cultural and social factors. Lean on the other hand is restricted by its dependency on fixed decisions from start as well as hundred per cent discipline and commitment from the team; large infrastructure projects are difficult to estimate hence decisions emerge in the project as it develops hence Lean structure will be hard to comply with. CCPM, CPM, PERT all focus on planning and managing project resources but pay little attention to team management, social and environmental factors.



This makes them hard to use effectively in developing countries where external and environmental factors are crucial to the success of a project. However, the PMBOK seems to be the most accepted framework in the area of project management. Thus, it will be used as a standard framework for the purpose of assessing the level of good practices in project management in large infrastructure projects. Besides, large number of project management approaches and techniques are available to eliminate these causes but yet projects still fail (Flyvbjerg 2003). The question is; why these projects fail regardless of the sophisticated project management tools, techniques and approaches that are available?

The focus of many project management research in the late 1970's moved to how to adapt a project into its implementation environment; external (Morgan and Gbedemah 2010). This was due to LIPs failure being linked to influences from their work/external environment. For example, in the US the Bay Area Rapid Transit (BART) in San Fransisco, California has often been cited as evidence to how environmental factors can affect the outcome of a LIP. As a result of poor management of the environmental (external) factors, the BART project had a 60% cost overrun, time overrun, and an operational distress as the actual cost of operation was higher then the estimated value due to low usage (Morgan and Gbedemah 2010). This example shows how poor of integration of the objectives of the project with that of the stakeholders and the overall business strategy can affect the performance of an LIP. The need to ensure that this incident does not happen in LIP was the reason why the principles of governance were introduced into the management of projects; this is referred to as Project Governance (PG). Bekker et al (2008) suggest that a similar reaction was seen in the corporate world when poor management of business resulted in the development of the concept of corporate governance, which was designed to provide the principles of governance in the management of businesses. Besides, PG promises to address issues in the delivery of projects such as:

1. Method to review planned against actual
2. Project goals not aligning to strategic objectives of organisations

3. Unclear decision making methods
4. All participating institutions showing responsibility in the project
5. Intelligibility
6. Immeasurable outcomes
7. Improperly defined deliverables
8. Auditing issues
9. Clarification of roles and responsibilities

These issues listed above are often associated with project failure, thus PG could arguably be the solution to project failure if it can deliver all its promises. Furthermore, at an APM conference, Dr Peter Partes; a speaker on the conference topic; concluded that in LIPs the success lies more on effective PG than on developing and delivering the project plan. Also, many organisations have been reporting that an effective PG structure is key to the successful delivery of LIP. This can be seen in the increase in number of texts that can be found about PG in recent times.

A search on the web using the Google scholar search engine shows a rapidly growing text on project governance from 71,200 between years 1990 and 2000, to 884,000 between 2000 and 2010. On the other hand publications in project management saw a large drop from 718,000 between years 1990 and 2000 to 479,000 between years 2000 and 2010 (Liu et al, 2005); see figure 2.4 below. This trend suggests a change in focus from project management as a way of delivering successful project and an increase in focus on project governance. This change could be as a result of the fact that research into project management approach has been extensively researched but project issues still persisting.

Year	Publications on Project management	Publications on Project Governance
1990 - 2000	718,000	71,200
2000 - 2010	479,000	884,000

**Table 2.4:** Search result of publications on project governance vs publications on project management (2 September 2011)

The question then is; what is the difference and relationship between PG and project management?

### **2.5.2 Project governance versus project management**

Project governance focuses on the relationship between the organs of the project; stakeholders, consultants, contractors, project manager and project team(s) while project management focus on resource planning, resource allocation and the delivery of the project plan (APM Booklet 2011).

Project management is defined as: a systematic approach to planning and guiding project processes from start to finish (PMI). According to the Project Management Institute, there are five stages that a project has to go through. These include: initiation, planning, executing, controlling, and closing. However, in most cases, the control aspect does not take into account several “external influences” that may deter the successful implementation of the project stages (Hope 2005). External influence here refers to factors that are not within the powers of the project manager to change. Some of the common external influences that have been identified in the APM Booklet (2011), includes: evaluation of proposals driven by initial price, rather than long-term value for money and lack of clear senior management and, in government projects, ministerial ownership and leadership amongst others. This lack of responsible ownership in project management leaves projects open to lack of commitment from project participants and stakeholders, hence accountability and responsibility in project life cycle becomes difficult to achieve. Table 2.5 below shows the list of common causes of project failure by OGC and their categories in terms of governance and management as classified by the APM.

Reasons for Project Failure	Governance or Management Issue?
1. Lack of clear link between the project and the organisation's key strategic priorities, including agreed measures of success.	Governance
2. Lack of clear ownership and leadership for the project from the organisation's governing body.	Governance
3. Lack of effective engagement with stakeholders.	Governance
4. Lack of skills and proven approach to project management and risk management.	Management
5. Too little attention to breaking development and implementation into manageable steps.	Management
6. Evaluation of proposals driven by initial price rather than long-term value for money (especially securing delivery of business benefits).	Governance
7. Lack of understanding of and contact with the project contractors / service vendors at senior levels in the organisation.	Governance
8. Lack of effective project team integration between clients, the supplier team and the supply chain.	Governance

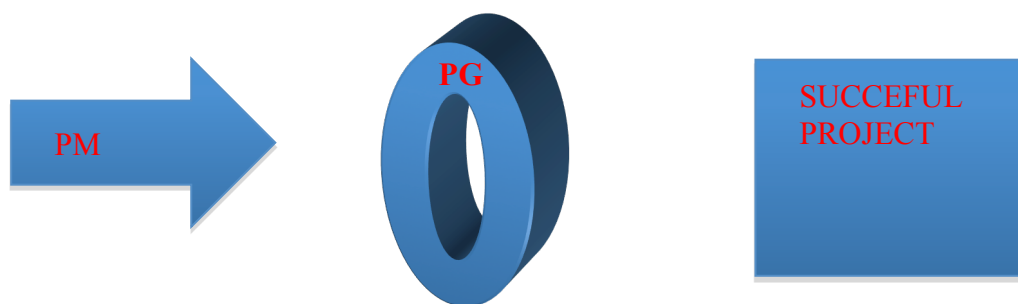
**Table 2.5:** *Causes of project failure and their categories (Adopted from the Guideline issued by the British Office of Government Commerce, HM Treasury, May 2007)*

Project governance aims to provide a controlling influence on the relationship between the internal and external factors in a project as against the controlling “manipulation” provided by project management which is centred on managing the project resources (Hope 2005). Besides, project governance focuses on providing guidelines to ensure that responsibilities and roles are clear to people involved within the project, reviews and audits are carried out at the right time, agreed project ethics are abided to, project benefits are identified and are managed throughout the project and conflicts in interest are resolved quickly while project management focuses on allocation of resources in a project according to the agreed plan.



**Figure 2.3:** Difference in project governance and management activities through the project stages (Adopted from the Guideline issued by the British Office of Government Commerce, HM Treasury, May 2007)

From figure 2.3, it can be seen that project management and governance activities are different. They play different roles in the project lifecycle. Thus, for the project goals and specifications to be achieved it is essential that both project management and project governance activities get implemented; with project governance guiding the project management activities. See figure 2.4



**Figure 2.4:** Using a combination of project management and governance to achieve project success

A further review of relevant literature suggest that most of the issues affecting the performance of LIP in general are more effectively addressed by effectively applying PG principle in the project management processes than by applying only the project management processes and techniques

(Liu et al, 2005). In the next chapter the concept of project governance will be explored in more detail.

## **2.6 Chapter Summary**

This chapter reviewed the differences between LIPs managed in developed and developing economies, examined the root causes of poor performances in LIPs managed in developing economies and investigated how common project management techniques and methodologies from developed economies apply to the situation in developing economies. The reviewed literature indicate that LIPs often fail to meet their original estimations and expectations; largely due to factors such as optimism bias, strategic misinterpretation and inadequate planning and estimation arising from the complexities and duration of such projects; but evidences from the online report search shows that LIPs fail more frequently in developing economies than in developed economies.

On the differences between management of LIPs in developing and developed economies, reports show that LIPs managed in both economic regions experience poor performances in meeting their planned objectives. There were more reports of failed projects in developing economies than on developed economies. Furthermore, a report indicated that over 11,600 LIP have suffered years of delay, cost overruns and some cases abandonment in Nigeria; an example of developing economy; in the last forty years; similar reports were found on projects in Malaysia, Ghana etc. on the contrary, LIPs in developed economies generally reported cases of delays, cost overruns and abandonment but the cases were not in such high numbers as in developing economies. Though, there was no metric to measure the causes of the difference in LIP failure rate in the two regions, comparison was made in terms of the way LIPs are managed in the two economic regions based on relevant literatures found. The comparison was made under the headings; management and availability of resources, supply chain and infrastructure, development and deployment of suitable techniques, tools and methodologies, influence on decision making process and control of external factors on LIPs. In developing economies, there is lacking in the availability

of resources such as skilled labour, funds and civil infrastructure for supporting LIP in comparison to developed economies, thus LIPs managed in developing economies are likely to face tougher challenges in managing their resources well. The supply chain process in developing economies face a less stable economic condition, thus, it is fair to expect more emerging changes in the original estimations of the project or else a thorough understanding of the environment is established and adequate measures taken. However, this is not the case in developing economies at present; hence procurement of materials for project contributes to delay in LIPs more than in developed economies. The use of project management techniques developed in an economically rational environment was found to be not easily applicable in developing economies. Most techniques used by LIPs in developing economies are from developed economies as the management organisations tend to use these techniques to attract funding; these LIPs are most times part sponsored by international bodies who approve funding when they are comfortable and familiar with how the project will be managed. Furthermore the decision-making process and control of factors external to the projects in developed economies tend to be more advanced than in developing economies.

The literature review shows that projects have continued to perform poorly in developing countries regardless of the availability of extensively developed project management techniques and tools. A review of the techniques, indicate that this lack of significant improvement can be associated with the negligence of the critical factors that could provide better monitoring and control in LIP; such as governance of projects. Project governance is focused on setting the terms of reference for an effective relationship between the key elements in the project; initiating, planning, executing, controlling and closing; to ensure transparency, accountability and most of all, justification for decisions in and between the boundaries of these elements while project management focuses on the development of a project delivery plan and the micro management of project resources according to agreed plan. Several reports argue that project governance has the answers to the long lasting poor performances in LIP as the introduction of corporate

governance to the corporate world during the poor management issues of 1980 helped in resolving the issues. Therefore, the next chapter will look into project governance to examine its significance, effectiveness, challenges and application.



## **CHAPTER 3.0**

### **DOES PROJECT GOVERNANCE REALLY HAVE THE ANSWER TO THE ISSUES OF LIP IN DEVELOPING ECONOMIES?**

#### **3.1 Introduction**

From the previous chapter, several reports have suggested poor performance of LIPs in developing countries, despite the existence of numerous project management techniques and methodologies. It was evident from the previous chapter that most of the causes of poor performances in LIPs were due to the way in which the project management techniques and methodologies were applied rather than on the techniques and methodologies themselves; largely due to poor monitoring and control across the four stages of projects. The introduction of corporate governance in the 1980's, as a response to poor management in the corporate world, helped resolve the management failures at that time by providing a platform for better monitoring and controlling of business activities. Thus there is a growing perception that project governance could provide the solution to the issues of poor performance of LIPs. This chapter will examine the importance of project governance in section 3.2. Section 3.3 will investigate the common practices, examine challenges that may interfere with the adherence to project governance recommended practices in LIPs, and evaluate if project governance provides the answer to the main causes identified to be critical to the performance of LIPs in developing countries. Section 3.4 will summarize the chapter.

#### **3.2 What is the Importance of project governance?**

##### **3.2.1 Defining the term Governance**

Governance in its wider term denotes the processes of influencing others to adhere by set rules or norms, whether undertaken by a government or network or family or tribe or formal organisation or informal organization (Bevir,2013). It involves the processes of decision-making and collaborations

that take place among the people involved in a shared responsibility of problem handling for a group (Hufty, 2011).

The Business dictionary defines it as:

*“the establishment of policies, and continuous monitoring of their proper implementation, by the members of the governing body of an organization. It includes the mechanisms required to balance the powers of the members (with the associated accountability), and their primary duty of enhancing the prosperity and viability of the organization.”*

Because governance is a very general concept that can refer to all types of groups, it entails that narrower definitions are used regularly to denote a specific level of governance associated with a type of group. This may include; public governance, global governance, non-profit governance, corporate governance, and project governance (Hufty, 2011). It can also be related with a particular type of activity or outcome such as; environmental governance, Internet governance, and information technology governance.

Furthermore, governance can also be associated with a particular model of governance, for example; regulatory governance, participatory governance, multilevel governance, meta-governance, and collaborative governance (Hufty, 2011).

Governance can also be used in describing normative or practical programmes. For instance, the normative idea of impartial or good governance is often used amidst public, voluntary, and private sector groups (Hufty, 2011).

In the context of this research, governance is being examined in association with project or LIPs; thus, the focus of this chapter will be narrowed down to project governance rather than all aspects of governance.

### **3.2.2 Defining the term Project Governance**

Before we go into identifying the importance of Project Governance (PG), let us first of all define and identify its history.

The Cambridge Dictionary (1995) defines the word “govern” as “*to have a controlling influence on, to have a direct effect on, or to fix or decide*”. Governance is the role of a government in a narrow sense of it. In a broader sense, it involves making a strategy suitable for influencing or controlling behaviour. Governance seeks to achieve truthfulness, transparency, integrity and fairness by strategically influencing behaviour (APM Booklet 2011).

Project Governance was developed between 1980 and 1990 (Bekker et al 2008). The concept is to try and use the principles of governance to control the continuous mismanagement seen in project management; in terms of using the resources originally estimated for the project; as project management techniques have so far failed to stop projects from having cost overruns, delays and producing final deliverable that meets or exceeds the expectation of the project stakeholders (Bekker et al, 2008). Owing to the fact that corporate governance was used to resolve the management intensifying management issues seen in the corporate world in the 1980s, there was a perception among professionals, in the project management field, that governance could provide the same impact on the management of projects.

The review of reports on project governance revealed that there is no globally accepted definition for the concept (Klakegg et al 2008). Various institutions and industries have provided their own definitions to the term due to a lack of formal and comprehensive definition. For example the information technology industry connotes project governance with ‘protection of and access control to information’ (Turbin 2003; Liu et al 2005), while the term is connoted as a control environment that covers the functionalities of a project life cycle by public-private partnership organisation (Miller et al 2005). Also the Association for Project Management (APM) has a guide called governance of project management, which defines the activities that will help govern the project management process. In general they all tried to provide better monitoring and control for improving the performance of projects.

In the publication “*Directing Change: A guide to governance of project management 2011 Association for Project Management, Buckingham Shire,*

UK”, the Association for Project Management, (APM) UK defines project governance as:

*“Project governance is defined as the extension of the principle of governance into the management of individual projects.”*

Furthermore, the APM also mentions that:

*“Governance of project management is a subset of the activities involved with corporate governance. It also means that most of the methodologies and activities involved with the day-to-day management of individual projects lie outside the direct concern of corporate governance.”*

According to Bekker et al (2008) project governance of large capital projects can be describe as:

*“A set of management systems, rules, relationships and structures that provide the framework within which decisions are made for the development and implementation to achieve the intended business or strategic motivation”.*

LIPs are usually exposed to corporate governance guidelines; however corporate governance does not have a globally accepted guideline. This diversity in guidelines results in difficulties when handling multi-company, multi-country or multi-industry projects, as the different corporate governance principles will all have to be applied at the same environment, the project. It is possible that the difference in corporate governance guidelines, alongside the fact that corporate governance does not allow for the uniqueness and time constraints of projects contributes to the inability of corporate governance helping to provide the required monitoring and control in projects. This highlights the concept of project governance as a way of providing corporate governance principles to projects but with respect to their unique nature.

Corporate governance is considered as a globally accepted concept that maps out an overall guidance for the responsible, fair, transparent and

accountable conduct of business. Several definitions have been given to corporate governance and one of the most popularly accepted in most literature is the definition given in the *Organisation for Economic Co-operation and Development* (OECD) Principles of Corporate Governance 2004, it states that:

*“Corporate governance involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.”*

Unlike corporate governance the level of detail of financial and legal disclosures for a project are unclear in project governance. Also the timeframe for a project is shorter than that of a corporate organisation; hence a different approach is required in terms of the process and speed of decision-making. For example the process of introducing a change in an organisation could take months, but in a project that will distort the project duration plan and will mean more cost for the project Bekker et al (2008). On the other hand the study by Okpara (2011) suggests that the principles of corporate governance apply to project governance, hence project governance should be aligned with corporate governance and should be a sub set of it. This means that project governance should incorporate the uniqueness and temporary nature of projects, whilst applying the principles of corporate governance.

Nevertheless records show that there are incidents where regardless of the application of a corporate governance guideline, businesses still encounter failure; for example, corporate scandals at MCI Inc. (formerly WorldCom) and Enron where lack of transparency resulted in severe losses for the organisation (Adlan 2007). In these cases, it is arguable that the corporate governance guideline was either not properly adhered to or was not applied effectively, since in most other cases, where it was applied, organisations achieve success. Hence, the introduction of corporate governance principles

does not necessarily guarantee responsible conduct but provides a strong guideline that must be effectively applied to achieving success. In other words, by merely introducing corporate governance in an organisation, that does not guarantee success but an effective application of the principles is also essential to ensure success (CACG 1999). This seems to be the reason behind the absence of a single framework for project governance, as organisations tend to use the main components of the concept of project governance to create a guideline they consider that it will work effectively for them.

#### Chief Executive

- Alignment with key business objectives
- Controls are in place
- Peace of mind
- Project Sponsor
- Management of the Business Case
- Alignment of key stakeholders
- Represent the project
- Clear direction and decision making
- Learning from experience

#### Project Manager

- Clear framework of responsibility, accountability, delegated authority
- Management of issues, change, risks and opportunities
- Reporting, review, audit, (more!) work

#### Stakeholders

- Communication of status
- Open and honest reporting
- Timely and reliable project forecasts
- Customer
- Peace of mind?
- Delivery on time?

In conclusion, there is no comprehensive formal definition for the concept of project governance. Though, the concept evolved from the principles of governance derived from corporate governance particularly, it has a different approach to corporate governance since it is meant to be applied to a project rather than an organisation; a project has a shorter lifespan than an organisation does. An effective project governance guideline should ensure the delivery of the expected values of projects and also save money by monitoring and controlling all expenditure for the risks being confronted. Nevertheless, some argue that project management/control should accomplish this task. The next subsection will present the pillars and principles of project governance.

### 3.2.3 Three Pillars of Project Governance

The three pillars of project governance are; structure, people and information (PMBOK, 2004). These are the foundation on which any good project governance framework is built (PMBOK, 2004). The functions of each of the three pillars are discussed below:

#### **Structure**

The structure refers to the groups or committees that are accountable for the successful delivery of the project. The group could be called a project steering committee or project board and should also include management representatives from the key stakeholders/user groups depending on the nature and scale of the project (PMBOK, 2004). This group must be clear on their responsibility and have the right level of authority to be able to carry out their duty effectively. The group must have overall authority over the project and their responsibility clearly stated in a document as terms of reference for the committee. In general, the steering committee should be responsible for approval of project deliverables, help resolve issues and policy decisions, approve scope changes, and provide direction and guidance to the project (APM, 2011). Depending on how the scale and nature of the project they could also be involved in securing resources, as well as fill other roles as defined by the project roles and responsibility documentation. Thus, the

decision rights of the committee and communication protocol must be specified in policy documentation (APM, 2011).

## **People**

This refers to the people that are appointed to the project board or steering committee. The competence of the people in terms of knowledge about the project as well as the level of authority the people have is perceived as key to the effectiveness of project governance policy. The population of the committee or board is subject to the nature and scale of the project (APM, 2011). Furthermore, there are other factors; such as stakeholder interest and sponsorship; that determines the membership of the project governance group (APM, 2011).

## **Information**

This refers to the free and honest disclosure of information about the justification of the project, feasibility, issues, risks, realisation of benefits, status reports etc, provided to the project governance group/committee to enable them make informed decisions (APM, 2011).

Within these three pillars are the principles that enable the requirements of the three pillars to be carried-out in a project. There are the core principles that apply to any project regardless of nature and scale. These include:

### **Core PG principles:**

1. Ensure a single point of accountability for the success of the project
2. Ensure project ownership is independent of Asset ownership, Service ownership or other stakeholder group
3. Ensure separation of stakeholder management and project decision making activities
4. Ensure separation of project governance and organisational governance structures

Other principles that complement the core principles as well as take into account the needs of large-scale projects include (APM Booklet 2011):

<b>Project Governance Principles</b>	<b>Codes</b>
1. The board/steering committee has overall responsibility for governance of project management.	PGP 1
2. The roles, responsibilities and performance criteria for the governance of project management are clearly defined.	PGP 2



3. Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.	PGP 3
4. A coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio.	PGP 4
5. All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.	PGP 5
6. Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.	PGP 6
7. The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.	PGP 7
8. The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.	PGP 8
9. There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.	PGP 9
10. The organisation fosters a culture of improvement and of frank internal disclosure of project information.	PGP 10
11. Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.	PGP 11
12. Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.	PGP 12

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**Table 3.1:** Governance of Project Management Principle by APM (APM, 2005)

**N/B:** These twelve principles will be the ones to be used in this study as the study focuses on Large Infrastructure Projects.

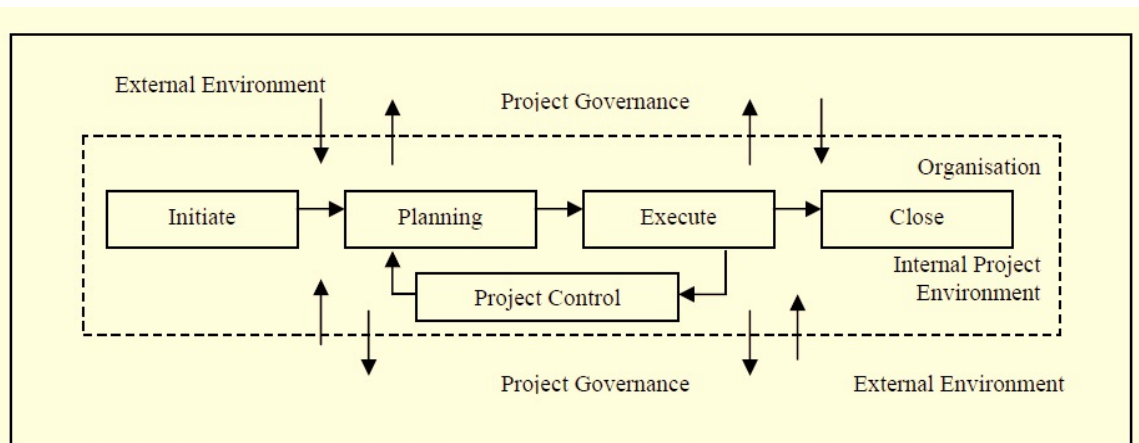
### 3.2.4 Project governance versus project control

Project control is a major part of project management that ensures the specifications and estimations on the project plan are followed. In Peter Morris's book; The WILEY GUIDE to Project Control, the term project control was defined as the process that:

*".....ensures that the project delivers what it is set up to deliver. Fundamentally, the process of project control deals with ensuring that other project processes are operating properly. It is these other processes that will deliver the project's products, which in turn will create the change desired by the project's sponsor."*

Project control in effect, forms a part of project governance as project governance sets a framework/model within which adherence to good project management practices are ensured; and one of these practices is good project control.

Thus, the concept of project governance provides a chance for the function of project control in a project environment to be reviewed. Project control mostly focuses on the everyday activities of project management without making any genuine reflection on stakeholders' management, strategic alignment of project objectives to that of organisation or stakeholders, and other external influences that affects the project (see figure 3.1).



**Figure 3.1: Project Governance versus Project Control (APM, 2011)**

Figure 3.1 presents an illustration of the difference in function of Project Governance from Project Control. The inner section of Figure 3.1 shows how PMBOK describes the typical process of managing a project within an organisation (PMBOK Guide 2000). The project process is grouped into stages for ease of representation. As shown on the Figure above, the stages include: Initiate, Plan, Execute and Close. Project control is introduced to validate that the planned activities at the planning stage are followed and completed according to the originally approved time, cost and quality specifications. Thus, this makes project control part of the responsibilities of the project manager and this falls within the internal project environment. However, surrounding the internal environment is the external environment. This is made up of external organisational influences, stakeholders, economic, social and political influences, etc. that could potentially deter the

overall project performance. Project governance provides a framework that controls the influence of the external environment on the internal environment of the project (Bekker et al, 2008); thereby, making sure that project control is carried-out without the influences coming from the external environment. In effect, project governance provides an “atmosphere” within which projects can be developed, executed and controlled more effectively. Hence we can conclude that project governance does not replicate the functions of project control but ensures that they are not influenced by factors external to the project execution and planning process; these factors may include inaccurate estimation, strategic misinterpretation etc.

### **3.2.5 Evaluating the importance of Project Governance**

Bekker et al (2008) identified that, in an organisation, the major causes of failure of corporate governance in tackling the deficiency in public accountability on projects includes; too much focus on protecting shareholder interest in projects as well as the fact that most large capital projects usually engages several countries and companies, meaning that interest of different stakeholders from the various organisations clash. This issue usually needs to be dealt with carefully to ensure it doesn’t deter the project performance. Therefore, it is important that centralised governance is provided for the LIPs to tackle this issue. The project steering committee is supposed to provide this but with no specific guideline on how to bring this unique type of governance that is suitable for the nature of LIP management; it is more difficult for the steering committee to perform to expectation.

It is this need for a clear form of governing mechanism that is suitable for projects that led to the emergence of the subject ‘project governance’. In summary, project governance expected to deliver the following benefits (APM 2011):

1. Method to review planned against actual
2. Alignment to Strategic objectives
3. Decision making method
4. Competing project dependencies are apparent
5. Responsibility

6. Intelligibility
7. Measurable outcomes
8. Defined deliverables
9. Auditability
10. Clarification of roles and responsibilities
11. Improved risk management

The four objectives of project governance as specified by the Association for Project Management booklet in 2011 include:

- **Controlling cost and time overruns in large projects:** As a result of pressure on sponsors of large capital projects in these recent poor economic conditions across the globe cost overruns are increasingly becoming unacceptable in projects. Project governance aims to tackle overruns by allocating responsibilities to specific roles in the project governance process it will be easier to track the person or people that have contributed to the poor performance of a LIP; thus they can be held accountable.
- **Ensuring long-term business benefit:** Project governance aims to ensure that the projects with the strongest demonstration of benefits and value are embarked upon by encouraging and rewarding transparency in projects.
- **Maximising of resources:** Project governance tackles the mismanagement of project resources by providing a centralized project selection screening procedure for the project decision makers so that resources can be allocated to only the most important projects.
- **Ensuring the uniform application of best practices:** Due to the large number of available project management techniques and tools, it is expected that in developing economies, different project management techniques be applied to different LIPs. This lack of consistent use of project management techniques in organisations has several consequences on the variations in performance level of different project implemented by same organisation. The technique

could be tailored to suite the requirements of the region and industry in which it is being implemented but should have a consistent method of arriving to these (Levitt et al 1980). Project governance seeks to provide a uniform technique/application for best practice by monitoring and controlling the choice of techniques to be used against their suitability for the project.

The next section will examine project governance guidelines that are available to this research in order to identify and understand how organisations apply the principles and objectives of project governance.

### **3.2.6 Review of available project governance guidelines/framework**

A search for PG guidelines indicated that there were not many of them that are accessible online or in the university libraries as they were private properties of the organisations that own them. However, seven project governance guidelines were available online from well-established organisations. It was clear from a close study that they all address the main objectives/principles of project governance but showed differences in the practices/policies they specified for accomplishing them. The reviewed guidelines included:

1. Delphi
2. AON
3. UCL
4. APM
5. ERP
6. PRINCE2
7. UK HM Treasury

There are no standardized project governance frameworks that have been generally accepted by everyone in the field but there are frameworks that have been developed and promoted by four established bodies; that is; professional bodies, project consulting companies, government organisations and private organisations. Most of the existing frameworks are to do with small and large IT projects hence, provide a structure that is suitable for the processes and phases seen in an ideal IT project. Only a few PG

guidelines/frameworks have been developed for LIPs. This makes one wonder if they are not applicable to LIPs due to the challenges of applying PG in LIPs, or that the necessary authorities are resistant to change, or that they have not been deployed because the authorities for strategic reasons are simply ignoring them? From the review of several governance guidelines, the most elaborate of all is the AON guideline. This guideline specifies project governance functions, deliverables and practices for each project stage. Also, while the other guidelines focused on providing functions for addressing the key objectives and principles of project governance, AON guideline provides the functions as well as specific activities to accomplish those functions; thus more detailed and simpler to use (see Table 3.2). However, there are no reports to verify that strict adherence to this guideline has resulted in an excellent performance of a LIP; hence we cannot tell if it's recommended practices are best for improving the performance of LIP in general. Moreover, the other project governance frameworks/guidelines must have been developed to serve the sensitive governance needs of the organisations that developed them. This suggests that it is possible for a project governance framework to be suitable for one organisation but unsuitable for another.

The "Directing a Project" process in PRINCE2 does the governance function. The PRINCE2 however, has a similar structure to the AON guideline's; in terms of specifying deliverables as well as functions; but focuses more on the expectations of the governance process and little on the practical activities, thus it is unclear how to measure if governance of the project is not being done properly as the project progresses.

Project governance guideline by AoN suggests that at the initiating stage of a project, the steering committee has the responsibility of verifying the financial, risk, strategy and deliverables of the project are worth the required investment before the LIP is approved. The same principles have been supported by the Association for Project Management in their publication; "Directing Change: A Guide to Governance of Project Management". While the latter focuses more on the composition and risk assessment at this stage,

the earlier emphasises the need for assessing strategic fit and returns of LIP. This difference in focus of the two guidelines suggests that the organisations that develop the guidelines tend to adapt the practices to the vital elements of management that needs attention in their organisation. Therefore, it is important that the project governance practices recommended for LIP management in developing economies be adapted to their major needs.

The UK HM treasury and the APM categorizes their frameworks for governance of project governance into four areas; programme direction, project ownership and sponsorship, the effectiveness of the project management functions, and reporting and disclosure. Whereas the Delphi and ERP categorizes their frameworks into: roles of steering committee, cost estimation and control project review and audits, ethical, responsible conduct and conflict of interest. The AoN and UCL frameworks is categorised into project stages. This typically shows how these framework use different approaches and practices to attempt to achieve project governance objectives and principles in their organisations.

Other guidelines such as the: “University College London IT project governance guideline” indicates some practices that must be used to assess a project in each stage before allowing it to progress to the next stage. In the initiating stage, the project identification guideline is used to assess where a new project fits in the university strategic plan before the project is now assessed for risk and returns. The initial assessment provides good information for classification of the project in a portfolio. Then the level of governance activities and resources to be allocated will be determined but if the project is classified as strategically unfit, it ends at this stage. The UCL project governance practice at the initiating stage seems to be very well structured in governing the management of projects but as it is only being used in medium scale IT projects, it is uncertain whether the practices will be applicable in LIPs. LIPs have more stakeholders and are more complex to manage, thus other interests might challenge the adherence to these practices, especially in developing economies. Therefore, the practices in guidelines designed for governance of LIP are not suitable to be considered

as adherence metrics to project governance in this research but seems to be suitable for the project governance needs of UCL IT projects.

In conclusion, all the reviewed frameworks/guidelines fundamentally try to address the four objectives of project governance as well apply the basic principles. Yet they pursue these using slightly varying practices and approach with respect to the sensitive principles of governance that need addressing in the organisation. Also there are no standardised project governance guidelines/frameworks that have been tested and proven to always produce excellent LIP performance, hence developing economies will have to identify sensitive project governance principles that have strong influence on the performance of her LIPs and develop a suitable project governance framework.

### **3.2.7 Identifying factors that may affect the adherence to common PG practices in LIP in developing economies**

In LIPs that involve operations between more than one country and company, some of the problems that are posed to project governance in such international projects, as suggested by Bekker et al (2008), include: accommodating a financiers requirements and risks, complexities associated with globalisation and virtual work, overcoming stake holder resistance to additional set of statutory requirements, application in countries where senior or influential individuals avoid better control for selfish reasons, making project governance simple and practical to apply and finally application of project governance in countries with weak corporate governance.

The challenges posed by LIPs in developing economies on project governance can be grouped into four main categories. These include:

1. Socio-cultural factors such as organisational adaptation
2. Economic factors such as availability of resources/skills
3. Technological factors such as technique adaptation
4. Political factors such as decision making process



### **3.2.7.1 Organisational Adaptation**

Changes in the routine and culture deployed by organisation in keeping accountability could stand as a possible obstacle to organisations adopting project governance guidelines (APM Booklet 2011). Senior staff of organisations would need to attend trainings as well as apply the new knowledge that they acquire. However, in most cases the senior staff would have gained several years of experience in the original methods that was being applied hence learning the new guidelines of project governance would raise fears of making their several years of experience inconsequential.

Another challenge that will be posed to organisation adopting project governance is the change in mind-set of the staff of the organisation (Regnery et al 2007). As a result of shift in management approach and guidelines, the staff may have to take on new roles. Studies by Liu et al (2005) suggest that people usually resist change especially when it requires adopting a different responsibility.

Lastly, the study by Regnery et al (2007), on project governance for the Deloitte Financial Advisory Services LLP, suggests that shifts in lines of reporting could be a possible cause of resistance to project governance by organisations that are involved in large capital project. The specification of responsibility as proposed by project governance guidelines would result in changes in the organisations lines of reporting and that may not suite the interest of some senior staff as well as junior ones.

### **3.2.7.2 Availability of Resources/Skills**

The skill set required to properly implement project governance in several aspects of large capital project will be demanding considering the fact that such projects engage multiple countries and companies. These countries and companies will have to operate at similar skill level to function properly. Hence, staff that would be participating in the project will have to obtain certifications/training to be able to achieve this. Such training will cost these organisations money and studies by Regnery et al (2007), suggests that most organisations prefer to hire skilled personnel rather than training their

own staff due to fear of empowering those staff to the extent of them becoming more attractive to the organisations competitors. On the other hand, if the organisations prefer to hire from outside the organisation, personnel that are trained in project governance then this may result in the loss of jobs in such organisations. Thus, this challenge will arguably push organisations into resisting project governance approach or else the significance outweighs these challenges.

### **3.2.7.3 Development of Appropriate Framework**

According to the study by Bekker et al (2008) some of the issues presented by LIPs to the development of an appropriate project governance framework, includes:

- (a) Accommodating the risks and requirement of the financiers
- (b) Applying project governance in organisations with weak corporate governance
- (c) Applying in countries where senior or influential individuals 'avoid better control' for self-interest
- (d) Complexities associated with globalisation and virtual work
- (e) Practicality and simplification of the process of applying project governance
- (f) Overcoming the resistance that may be posed by stakeholders to additional set of statutory duties and requirements.

In addition to the above list of project governance issues, the study by Bekker et al (2008) indicated that in developing governance guideline that will encompass the right considerations for good project governance poses major challenge on the introduction of project governance in large capital projects. Moreover, it would be much easier for organisations to continue with methods that they are familiar with as long as they still make profit, rather than engaging on a new approach that require a several changes and effort.

For example, one of the major issues that LIP suffers in developing economies; especially Nigeria; is delays and abandonment of projects half way through its completion (Turbit 2003). This issue is largely associated to the fact that most of these projects take years to complete and are government sponsored. Usually, when one government leave the next administration refuse to follow-up the project. This dis-continuation could be interpreted as the LIP not being aligned to the goals of the new

administration. Thus, no funding is allocated to the project. Others may interpret it as a political sabotage on previous administration by the new one while others view it as a lack of “National strategic map”. Whatever the reason is, developing a framework that will ensure that an LIP is strategically relevant in the presence of such issues will be challenging. Therefore, it is important that this research investigates how this challenge affects adherence to project governance principles.

#### **3.2.7.4 Decision making process**

Decision-making in a LIP can be biased by various factors other than rational reasons; thus, leading to a lack of strict adherence to project governance recommended practices; these factors can be political or socio-cultural (Sou et al 2007). In some developing economies, especially African and Asian countries, cultural influence on decision-making can be immense (Sonuga et al 2002). This can come in forms of selection of the project steering committee at the early stage of the project all the way to the response of workers to information in the executing stage of the project. Political influence on decision-making can take the form of ministerial interference on the activities of the project steering committee or project manager in a situation the government feels is going against their political strategy or interest. Therefore it is a big challenge for project governance guidelines to identify ways to avoid such factors stopping the recommended practices from being adhered to. This is a key factor that must be considered in investigating and developing a project governance guideline.

### **3.3. What is the impact of not adhering strictly to project governance guidelines, on the performance of LIPs?**

This sub section will examine where project governance framework/guidelines have been applied in projects to identify the relationship between the adherence to project governance practices and the performance of the projects in terms of the original cost, time and scope expectations of the project.

### 3.3.1 Examining the project governance practices and their relationship with LIP management performance

A search on the impact of project governance practices on project performances; on the web using Google scholar showed that the documentation of where project governance has been deployed in projects is limited. A search for reports on the relationship between project performance and adherence to project governance, using various combinations of phrases in online search engines, produced over five million texts at every attempt. However, most of these articles talked about democratic governance rather than project governance while the rest briefly discussed corporate governance. None of the articles clearly made any such relationship between project performance and adherence to project governance in developing economies. This could be due to the fact that there is poor documentation about project governance guidelines developed by developing economies; possibly due to the concept has not been standardised.

Though, the project governance guideline being used in the Nigerian public sector “The Due Process” was said to have contributed to improved outcomes from some LIP but it does not in most cases (Obasanjo 2004). Oguonu (2013) suggests that this inconsistency on the impact of using the guideline is due to poor project management practices such as; inadequate project definition and scope definition, use of non-professionals in planning and supervision of project, improper cost estimation techniques due to lack of continuous professional development, poor documentation ethics due to unclear communication plans and delays in responding to issues raised due to the fact that the Budget Monitoring and Price Intelligence Unit (BMPIU) serve as governing board to all public sector projects rather than each of the project having their own project governing board; this defeats the essence of the guideline. Thus this leaves one to wonder how effective the project governance guideline is in improving the performance of projects as well as management practice?

Nevertheless, when the same search was done for developing economies, there were no reports that have done this evaluation. A report by Williams et

al (2009) 'Investigating of governance frameworks for public projects in UK and Norway do not show that there is any strong relationship between the performance of projects and their adherence to project governance guidelines. For instance the home office, in the UK, used a complex governance framework in a PFI project but with flexibility in the adherence to the framework; thus the framework was not followed strictly; but the project performed excellently by reaching all its goals (time, cost, and scope). This project also had a decision making process influenced by political reasons as well as rationale which should have an adverse effect but that was not the case (See table 3.2). This suggests that flexibility in using governance framework could be beneficial in the performance of the project. Another case was the NEADS development and procurement project; this case suffered a lot of politically biased decision-making and was flexible in following the governance framework (See table 3.2). However, the project was reported to be going according to plan, the report on this project had restricted access to data about the project as it was an MoD project, thus its findings may not be generalizable or even reliable. However this project showed a lot of inconsistencies at the initial stage as a result of lack of monitoring and controlling of the management activities that are supposed to take place; this emphasises the need for governance at the initial stage to avoid such issues. Though the project is said to be successful, it carried on to successive stages without much reviews, which poses a question of how long should it take before it is necessary for a review to ensure good performance. However as the project has not been completed it is not known whether it will be successful at the end in meeting its strategic and project goals. In another project; the IFI2; there was a political intervention at the planning stage of the project, from the ministry, about the high budget of the project, which could be considered as a rational call for a review/ risk assessment to avoid financing issues at a later stage in the project (See table 3.3). At the end the budget was even expanded further. But the question is this expansion in budget a failure or success in performance of the project, as the original budget has been exceeded but the adherence to governance in the project is very good. Also the project is being recorded as going according to time and quality specifications. Therefore, the relationship

between adherence to the project governance guideline and project performance is unclear.

The fourth case shows a clear political bias in decision making so far in the implementation of the project. It was a shipbuilding project in Norway by Skjold. The project adhered to project governance framework flexibly but is recorded as so far going to plan though there is no independent cost estimator to confirm this.

Comparison of cases in this report based on project sources.

Project name	Home Office	NEADS	IFI2	Skjold
Project type	PFI	Development and commissioning	Design and build	Commissioning
Decision-making	Political/rational	Political	Political/rational	Political
Number of gateways passed (which)	2 (OGC3 and OGC4)	1 (MoD1 – only a part of the project)	1 (QA2)	1 (QA2)
Nature of gateway	Friendly	Critical	Critical	Friendly
Mode of operating the framework	Flexible	Flexible	Flexible/rigid	Flexible
Framework strictly followed	No	No	No	No
Deviations	Several gateway 3's and 4's. Early gateway 4	Initial gate for a previous sub-project only	Time and scope restrictions. Accept having no Project Management Plan	No independent cost estimate
Key findings in review	Confirming business case and contract	Not relevant	Confirming cost, risk and contract	Confirming cost and risk
Overall project performance according to review	Excellent	One part of project passed gate	Good	Good
Influence of review on project	No	No	No	No
Actual performance as of today	Completed on time and budget	In accordance with current plan	In accordance with plan, expanded budget	In accordance with plan

**Table 3.2:** Comparing cases where project performance is being judged using their adherence to project governance (Williams et al 2009)

In conclusion each of the above cases show a deviation from the practices defined in their respective governance guidelines but yet have a good performance level which suggests that not adhering strictly to project governance guideline does not have a lot of negative implication on the performance of the projects. Nevertheless it is not possible for us to draw this conclusion as a final generalizable fact as there was limited access to data in this research works and these are only limited samples. Therefore, it is important to review larger samples of projects with more data to be able to have a more generalizable and reliable conclusion. Also all of these examples are in developed economies; that clearly have better infrastructures, economic rationality and lower failure rate than developing economies; which means that with projects in developing economies, the case may be different. The case seen with the Nigerian public sector project governance guideline showed that some projects failed regardless of the

guideline being in place but there was no evidence to tell the level of adherence to the guideline rather there was evidence suggesting ineffectiveness. Thus we cannot draw a conclusion on the relationship between adherence to the guideline and project performance. Hence, more research is needed to be able to adequately examine this relationship.

On the other hand, the case of Metronet PPP contract with London Underground and PricewaterhouseCoopers office expansion project depicts how lack of project governance can result in poor performance of LIP.

The Metronet project experienced a lot of delay as a result of difficulties in the decision making process. All of the stakeholders could not reach unanimous agreement on key decisions due to their difference in commercial viewpoints. The National Audit Office report by Threapltton (Threapltton, 2014) states that there was inappropriate delegation of authority with the most influential in the decision on scope being the supply chain. NAO also suggest that insufficient resources for delivering the amount of work specified alongside poor delivery of renewals and maintenance were other issues resulting to the delays in the project. The NAO concluded by attributing all the issues to weak and poorly designed corporate governance structure; as the stakeholders had only 5% of their investment at risk so they were not motivated to deploy strict governance structure. This case in effect shows how lack of good project governance can lead to poor performance in LIP because corporate governance in a project is in effect project governance.

In the PricewaterCoopers case, there was a large cost overrun from the planned budget due to 35-weeks delay. This delay was caused unforeseen changes in the “super and sub structure works”; each of change cost about £16.5million and the original budget was £95million including the project’s 10% contingency. The client was blamed for cost overrun as he initiated these changes from the originally agreed scope; improper stakeholders’ consultations were made during the initiating stage of the project. Good project management would have helped in identifying the need for those consultations before approving the project plan, thus avoiding the need for changes in a later stage of the project, which led to the cost overruns.

However, from these relevant literature reviewed, there are no reported cases where a rigid adherence to a project governance framework has been proven to result in excellent performance of a LIP. Nonetheless, if good governance of project management is relevant to the performance of an LIP, then before the innovation of the concept of project governance some LIPs that performed well must have adhered to project governance principles without formally adopting a project governance guideline. This indicates that the principles of project governance are the underlying factor essential to project performance rather than a rigid adherence to the set practices in any individual guideline. This notion supports the statement made by Bekker et al 2008:

*“Governance of project management is not the rigid application of a complex methodology. The best results will come from the intelligent application of principles combined with proportionate delegation of responsibility and the monitoring of internal control systems.”*

There is no doubt that project governance principles are essential to the performance of LIP (see table 3.3). But as there are no standardised guideline with step by step practices that have been proven to work and there have not been a large enough reports showing how strict adherence to project governance guideline works, it is unclear how principles of project governance should be applied to overcome its challenges and ensure that it improves the performance of a LIP, especially in developing economies. Thus, it is important to further investigate this.

Theoretically the principles shown in table 3.3 specified suggests that high level of adherence to these principles should result in high performance of projects in developing countries as the issues found in most projects, in developing countries seem to be addressed by the recommended practices in this framework. Thus, these project governance principles could be useful in developing economies.



Project stages	Root causes of LIP poor performance in developing economies	Project Governance Principles
<b>Initiation</b>	<p>Core</p> <ul style="list-style-type: none"> <li>• Gap in expectations Definition</li> <li>• Lack of clear links between the project and the organisation's key strategic priorities, including agreed measures of success.</li> <li>• Evaluation of proposals driven by initial price, rather than long-term value for money.</li> </ul> <p>Facilitating:</p> <ul style="list-style-type: none"> <li>• Poor feasibility study</li> </ul>	<ul style="list-style-type: none"> <li>• The board/steering committee has overall responsibility for governance of project management.</li> <li>• Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.</li> <li>• A coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio.</li> <li>• The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.</li> <li>• Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.</li> </ul>
<b>Planning</b>	<p>Core</p> <ul style="list-style-type: none"> <li>• Inadequate resource planning</li> <li>• Inadequate cost, time and scope definition and estimation</li> <li>• Unclear Project Activity sequencing</li> <li>• Lack of clear senior management and, ministerial ownership and leadership in government projects.</li> <li>• Too little attention to breaking down development and implementation into manageable steps.</li> </ul> <p>Facilitating</p> <ul style="list-style-type: none"> <li>• Inadequate quality, communications, team task, solicitor, risk and procurement evaluation and planning</li> </ul>	<ul style="list-style-type: none"> <li>• The roles, responsibilities and performance criteria for the governance of project management are clearly defined.</li> <li>• Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.</li> <li>• Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.</li> <li>• There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.</li> <li>• Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.</li> </ul>

Project stages	Root causes of LIP poor performance in developing economies	Project Governance Principles
<b>Executing and Controlling</b>	<p>Core</p> <ul style="list-style-type: none"> <li>• Inadequate information distribution</li> <li>• Inadequate scope verification</li> <li>• Inadequate contract administration</li> <li>• Inadequate performance reporting</li> <li>• Inadequate overall change control</li> <li>• Lack of effective engagement with stakeholders.</li> <li>• Lack of understanding of, and contact with supply industry at senior levels.</li> <li>• Lack of Skills and proven approach to Project Management and risk Management</li> <li>• Lack of effective project team integration between clients, the supplier team and the supply chain</li> </ul> <p>Facilitating:</p> <ul style="list-style-type: none"> <li>• Inadequate scope change control</li> <li>• Inadequate schedule control</li> <li>• Inadequate cost control</li> <li>• Inadequate quality control</li> <li>• Inadequate risk response control</li> </ul>	<ul style="list-style-type: none"> <li>• Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.</li> <li>• All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.</li> <li>• Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.</li> <li>• The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.</li> <li>• The organisation fosters a culture of improvement and of frank internal disclosure of project information.</li> </ul>
<b>Closing</b>	<ul style="list-style-type: none"> <li>• Contract not close-out when project is no longer justifiable</li> <li>• No administrative closure to projects</li> </ul>	<ul style="list-style-type: none"> <li>• Projects are closed when they are no longer justified as part of the organisation's portfolio</li> </ul>

**Table 3.3:** *Illustrating how the root causes identified in LIP management in developing economies are tackled by project governance principles (Compiled from reviews)*

### 3.3.2 Summary of impact of adherence to PGPs on outcomes of LIPs

The tables below show summary of what effects that adherence to PGPs will have on external factors, LIP performance and following PM common practices.

	<b>Political</b>	<b>Economic</b>	<b>Socio-cultural</b>	<b>Technological</b>
<b>Adherence to PGP structure</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of economic interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of socio-cultural interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of technological interference on LIPs

	<b>Political</b>	<b>Economic</b>	<b>Socio-cultural</b>	<b>Technological</b>
<b>Adherence to PGP people</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of economic interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of socio-cultural interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of technological interference on LIPs

	<b>Political</b>	<b>Economic</b>	<b>Socio-cultural</b>	<b>Technological</b>
<b>Adherence to PGP information</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of economic interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of socio-cultural interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of technological interference on LIPs

	<b>PMI</b>	<b>PMP</b>	<b>PME</b>	<b>PMC</b>
<b>Adherence to PGP structure</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of economic interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of socio-cultural interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of technological interference on LIPs

	<b>PMI</b>	<b>PMP</b>	<b>PME</b>	<b>PMC</b>
<b>Adherence to PGP people</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of economic interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of socio-cultural interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of technological interference on LIPs

	<b>PMI</b>	<b>PMP</b>	<b>PME</b>	<b>PMC</b>
<b>Adherence to PGP information</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of economic interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of socio-cultural interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of technological interference on LIPs

	<b>Cost performance</b>	<b>Duration performance</b>	<b>Scope performance</b>
<b>Adherence to PGP structure</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs

	<b>Cost performance</b>	<b>Duration performance</b>	<b>Scope performance</b>
<b>Adherence to PGP people</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs

	<b>Cost performance</b>	<b>Duration performance</b>	<b>Scope performance</b>
<b>Adherence to PGP information</b>	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs	Adherence to PGP structure related principles contributes in the reduction of political interference on LIPs

### 3.3.3 Gap in Knowledge

Project governance has not been extensively researched in relation to project management. This can be further seen in the lack of globally agreed definition or practices for ensuring effective project management. As it stands organisations and countries in the western part of the world have been developing their own guidelines as with corporate governance (Stretton 2010). Thus, as developing economies have been shown to have a higher rate of project failure it is important that developing economies and

organisations operating in such countries start to develop their own project governance guidelines.

However, the guidelines developed by the organisations and countries in the developed economies were done using the principles of project governance that are most sensitive to their respective organisations or countries (Dunovic 2010). Hence it is important that the project governance principles that are crucial to successful LIP delivery in the developing economy or organisation is investigated.

A good example of a developing economy is Nigeria. The United Nation (UN) defines a developing economy with regards to how industrialized the economy comparing to her population. Nigeria is the most populous country in Africa with a population of over 150 million people and has a low level of industrialization largely due to unwillingness of investors to invest in the countries manufacturing sector as a result of political instability and lack of basic civil infrastructure (CBN, 2006). Thus, this qualifies it as a developing economy.

Further gauge for measuring a country's level of development as provided by the UN, includes, Per Capital (PC), life expectancy, Gross Domestic Product (GDP) etc. Table 3.6 shows that Nigeria has low GDP per capita and life expectancy figures; relative to her population; alongside other developing economies.

<b>Name</b>	<b>Gross Domestic Product (in billions)</b>	<b>GDP per capita</b>	<b>Population</b>	<b>Literacy Rate</b>	<b>Life Expectancy in years</b>
<b>Pakistan</b>	<b>\$465</b>	<b>\$2,482</b>	<b>187,342,721</b>	<b>50%</b>	<b>66</b>
<b>Colombia</b>	<b>\$435</b>	<b>\$9,735</b>	<b>44,725,543</b>	<b>90%</b>	<b>75</b>
<b>Nigeria</b>	<b>\$378</b>	<b>\$2,435</b>	<b>155,215,573</b>	<b>68%</b>	<b>48</b>
<b>Philippines</b>	<b>\$351</b>	<b>\$3,451</b>	<b>101,833,938</b>	<b>93%</b>	<b>72</b>
<b>Venezuela</b>	<b>\$345</b>	<b>\$12,491</b>	<b>27,635,743</b>	<b>93%</b>	<b>74</b>
<b>Morocco</b>	<b>\$151</b>	<b>\$4,736</b>	<b>31,968,361</b>	<b>52%</b>	<b>76</b>
<b>Qatar</b>	<b>\$151</b>	<b>\$177,591</b>	<b>848,016</b>	<b>89%</b>	<b>96</b>
<b>Ecuador</b>	<b>\$115</b>	<b>\$7,663</b>	<b>15,007,343</b>	<b>91%</b>	<b>76</b>
<b>Cuba</b>	<b>\$114</b>	<b>\$10,291</b>	<b>11,087,330</b>	<b>100%</b>	<b>78</b>
<b>Iraq</b>	<b>\$113</b>	<b>\$3,730</b>	<b>30,399,572</b>	<b>74%</b>	<b>71</b>
<b>Syria</b>	<b>\$107</b>	<b>\$4,770</b>	<b>22,517,750</b>	<b>80%</b>	<b>75</b>

**Table 3.4:** World Economy statistics; source: CIA world Fact book, accessed 01<sup>st</sup> May 2013 (N/B most developed economies are excluded from this table as they are irrelevant in the comparison)

Furthermore, a search on the web for texts and publications on ‘project governance guideline in Nigeria’ produced 1,680,000 texts related to the theme but none of them indicated the existence of a project governance guideline for the country. However, even though we cannot verify that no organisation in the country has a project governance guideline, we can ascertain that the country has not yet adopted any project governance guideline. A pilot study in the six geopolitical region of the country; involving consultants and highly educated and experienced professionals from both local and multinational organisations was carried out. The study was done by survey over the phone, in the area of project management and governance. The results of the pilot study indicated that the concept of project governance was totally new to 90% of our respondents. However, Obasanjo (2004) confirms that the country has developed an act since 2002 called the “Nigerian public procurement act” also known as “The Due Process” which serves as PG guideline for public sector sponsored LIPs. Nevertheless LIPs have been failing since then; even though the government has claimed to have a reduction in cost and time overruns in some of the LIPs implemented

using the guideline between 2002 to 2012 (Obasanjo 2004). There is a suggestion by Ekpenkhio (2003) that this PG guideline have only been adopted by the federal government and not the state and local government; thus proposing that only the federal government sponsored LIPs have been influenced by the guideline. However, some LIPs by state governments have been successfully completed to estimated budget, duration and scope between 2002 and 2012 while some federal government sponsored LIPs have failed within the same period. This indicates a lack of theory on how much the principles of project governance are being adhered to in LIPs managed in Nigeria and the relationship between adherence to PG principles and LIP success in Nigeria. Hence, there is need to investigate this in order to identify if adherence to PG principles is critical to the success of LIPs in Nigeria. This knowledge will contribute to the management of risk in LIPs managed in Nigeria.

However, even though PG have been considered as having solutions to the identified issues, it is uncertain what impact other factors surrounding the implementation process of a LIP can have on the adherence to PG in developing economies. The following section will explore factors that could affect the adherence to PG principles.



### 3.4 Summary

The purpose of project governance is to solve issues of loose structure resulting in poor management of projects. It was originally used mainly in IT projects but has proven to be applicable in large construction projects and has been effective in some projects where it was applied correctly. However, it is assumed that it will face a few challenges in practice due to human resistance to change but those challenges are likely to be overcome when it is used more often. Finally the concept of PG has not been widely understood and explored in LIP but shows the potential to bring solution to the LIP issues in developing economies. Thus it is important that we verify if PG recommended practices are suitable for solving the problems of LIP in developing countries. This will form the focus of this research.

From the review of the limited literature available on project governance it can be concluded that there was no agreed definition or guideline for the governance of projects. In general the promoters and developers of the various frameworks do show that the goals of project governance are; controlling cost overruns in large projects, ensuring long-term business benefit, maximising of resources, providing a balanced investment portfolio and ensuring the uniform application of best practices.

Different project functions such as, project control and corporate governance, have been confused by many as having the same function as project governance but the review indicates that they have totally different functions. PG is focused on setting the terms of reference for an effective relationship between the key elements in the project; initiating, planning, executing, controlling and closing; to ensure transparency, accountability and most of all, justification for decisions in and between the boundaries of these elements. On the other hand, project control focuses on making sure the projects are delivered to agreed plan and corporate governance applies similar principles as PG but for operations rather than projects; thus not temporary in nature.

The governance of a project is faced with similar challenges associated with changes in an organisation. For a good project governance framework, it is necessary to consider four major categories of information, which includes roles, and responsibilities of people, tools and methodologies, control mechanisms and risk management. Taking into account that most large infrastructure projects involve: different project teams, companies, organisations, developing and developed countries it is important that the governance framework is generic in structure otherwise it will not be able to adapt to the needs of different projects and their levels of complexity. Commitment and discipline should be shown by the stakeholders, management and project team to ensure that the governance model works effectively.

Finally, most existing governance frameworks apart from the APM project governance guideline have mainly been developed for IT projects which have a different nature and scope from the kind of projects being studied in this research. Hence they may not take into account the nature and complexities of a utility infrastructure project.

However, there is a lack of clarity in the impact PG principles are having on LIP performance in Nigeria. This is due to the fact that some LIPs where PG guideline have been used failed while some that had no formal PG guideline applied, succeeded. Reports by Bekker et al (2008) suggest that adherence to PG principle is key to success in LIP and not necessarily to set of activities stipulated in a PG guideline.

## **CHAPTER 4.0**

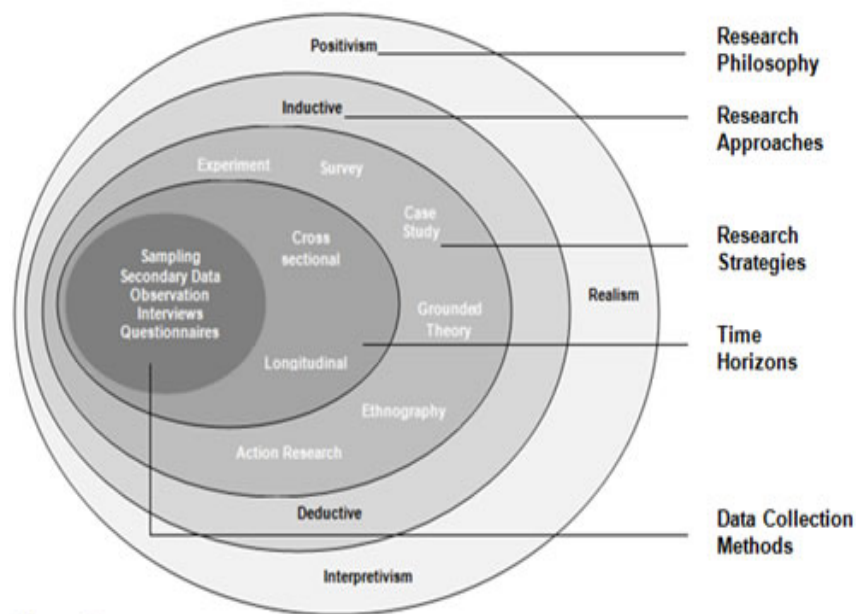
### **RESEARCH METHODOLOGY**

#### **4.1 Introduction**

Research methodology can be described as the approach used in conducting a research in terms of the philosophy, research tools used and research strategy deployed in order to satisfy a set of research questions or objectives (Crow, Charles, Wiles and Heath 2005). This chapter will attempt to identify the most suitable methodology for this research. Section 4.2 will evaluate the best research design for this research. Section 4.3 will present the data analysis steps and section 4.4 will summarize the chapter.

## 4.2 What is the best research design for this research and why?

Figure 4.1: Research Process ‘Onion’ below shows the various aspects of the research methodology that will be discussed in this chapter.



**Figure 4.1:** Research Process ‘Onion’ (Sanuders et al, 2003)

### 4.2.1 Research philosophy

The research philosophy selected in this study is the positivism philosophy as it best suits the nature of the study. A positivist approach; a single reality; helps this research to focus on answering the research questions by distinguishing between facts and value judgement (Sanuders et al, 2003). This was achieved in this research by using five sources of data for each question thus, not taking the responses of each of the survey participant for what it says but by reading meaning from what other participants say as well. In thinking about the true meaning in the data, objectivity and consistent use of rational approaches was used to narrow down the different data sources into a single reality.

The interpretivist philosophy could create more than one reality/answer to the relationship being studied in this research. This will mean that the different propositions of the different respondents on each question could all be the reality. This position will be focusing more on understand and interpret the reason behind the propositions of the different respondents rather than on identifying relationships (Hudson and Ozanne 1988). As this research focuses more on relationships between PGPs and various LIP outcomes, thus, interpretivism is not the suitable research philosophy to use in this research.

A realist philosophy on the other hand will tend to view the relationships being studied in this research as an approximation of the reality and that the more we study the relationship the closer we will get to understanding reality (Carson et al 2001; Lincoln and Guba 1985). To reach a conclusive level of answers to the research questions using this approach will require a lot larger sample and longer period of study, which are resources not achievable within the time and cost available to this study.

This research is best suited to the positivist philosophy, which suggests the existence of a single reality to any research question regardless of the belief of the researcher (*Sanuders et al, 2003*). Interpretivism follows a more flexible view on reality, which is suited for study of the human behaviour in taking meaning from a phenomenon that is not yet clearly understood. The interpretivist philosophy will generate additional dimensions for analysis, thus creating larger work for the limited time available for this study; unlike the positivist philosophy (Hudson and Ozanne 1988).

#### **4.2.2 Aims and Questions**

The review of relevant literature suggests that LIPs managed in developing economies fail more than those managed in developed economies. Besides, further review shows that most of these LIPs that are successful in developed economies practice PG principles. However, there was insufficient evidence, from available literature, to show whether LIPs managed in a developing economy adhere to PG principles and how it affects them.

Therefore the aim of this research is to answer the question; to what extent adherence to PGPs impact the outcome of LIPs implemented in developing economies, with Nigeria as an example? Thus, this research will attempt to answer this question using the following steps:

1. Identifying to what extent LIPs implemented in Nigeria adhere to PGPs
2. Identifying the relationship between adhering to PGPs and the adherence to PM common practices
3. Identifying the impact on adhering to PGPs and PM common practices from the impact of adverse political, economic, social and technical influences on the LIPs
4. Then identifying the relationship between different adherence levels to PGPs and performance of the LIPs in Nigeria, in meeting their original cost, scope and time estimations
5. Finally, review if there are patterns that can indicate how adherence to PGPs impact on the overall outcome of LIPs implemented in Nigeria using the three relationships identified in steps 2, 3 and 4

The findings of this research will contribute to knowledge by identifying whether adhering to PG principles has any impact on the outcome of LIPs in developing economies; see research question in subsection 1.2.2 in chapter one.

This research will be using Nigeria as an example of a developing country. In order to identify the appropriate approach to follow in this exploration, the next section will evaluate the type and amount of data required; where and who we can get this data from; access to the identified sources of data and the appropriate tools to use.

#### **4.2.3 Data requirement**

Bekker et al (2008) suggest that adherence to strict guidelines of PG may not necessarily guarantee project success but a flexible use of the principles is more likely to produce success. As the PG guideline for Nigerian public sector has not shown any strong link with LIP success; since some LIPs

managed in states where the guideline is not yet adopted recorded success but others managed at the federal level where it is adopted still failed (Ekpenkhio 2003). Does this mean adopting the PG guideline did not have any impact on the performance of the failed LIPs? Or has the guideline not been adhered to in the failed cases thus, resulting in the failure? It is unclear how well the PG guidelines or principles in general were followed in the federal public sector LIPs due to lack of online documentation and publications on specific LIPs where the guideline was used., thus one cannot identify the right level of adherence that must be attained to ensures success or even conclude what impact PG principles in general have on LIP performance in Nigeria. It is possible that some principles may have been adhered to in some of the LIPs that adopted the Nigerian public sector PG guideline. But the level of adherence can only be identified by investigating further due to lack of documentation on this. This investigation will help to identify if there are sensitive PG principles that projects must adhere to in order to succeed or level of adherence to such principles that will ensure success. Therefore, to identify those sensitive principles, it is important to get information about how the LIPs progressed from the initiating stage to the closing stage of some failed LIPs and some successful LIPs then examine them to see how the adhered to PG principles and how the performance from the beginning to the end of the projects. This information can be gathering from documents on the LIPs such as; progress reports, project plan, project logs and closing reports. However, not all of these documents are accessible, as some are usually made public by the involved organisations while others are not. So to increase the chances of gathering rich information on the LIPs, the project participants such as;

- Senior management,
- Stakeholders,
- Beneficiaries,
- Consultants,
- Contractors and
- Owners/sponsors

Could be the only other useful source of generating data about the project since due to time constraints, we cannot conduct a data collection where the day-to-day activities of some LIPs can be observed and records over the full

lifecycle of the LIPs; usually between 12 and 120 months. Hence, this research will need to reach these personnel for data to supplement the ones that will come from the documents; this implies need for primary data. In social research, primary data can be gathered by using tools such as; questionnaires, observation techniques, focus groups or interviews (Kvale 1996). Sub-section 4.1.4 will evaluate which tools are most suitable for collecting the data required for this research.

#### 4.2.4 Data sampling

A sample is “a smaller (but hopefully representative) collection of units from a population used to determine truths about that population and the sampling frame is the list from which the potential respondents are drawn” (Field, 2005). In this research the general study is developing economies and Nigeria has been selected as the single example, because of its characteristics (see chapter one). Furthermore, a minimum of four LIPs from any of the major areas of transportation, utility, electricity, buildings will be randomly selected for this study based on access and availability of respondents; provided they meet the criteria of being categorized as being an LIP (see chapter one). See table 4.1 for the prospective respondents and the information needed from each category of people:

<b>Prospective Respondents</b>	<b>Relevant data</b>
Beneficiaries such as community leaders/members, government departments and organisations	Data about practicing of PG principles in the initiating stage of the LIP
Quantity surveyors, architects and other consultants to LIPs	Data about practicing of PG principles in LIP initiating and planning stages
Senior staff member from the owner/sponsoring organisation of LIPs	Data about practicing of PG principles in all LIP stages
Project managers, team leaders or other senior management members from contractors/suppliers	Data about practicing of PG principles in planning, executing and closing stages of the LIP

**Table 4.1:** Prospective respondents and the information relevant from them

The data from each of these different prospective respondents are important, as it will help in verifying the consistency of the data collected from different respondents on a given LIP. The documents needed, from each LIP will also



have different level of relevance and help in verifying the consistency of the data collected from interviews. See table 4.2 for details on this.

<b>Project Document</b>	<b>Relevant data</b>
<b>Progress reports, logs and</b>	Data about what happened in executing and closing stages of the LIP
<b>Project plan</b>	Data about what happened in planning stage of the LIP
<b>Closing and review reports</b>	Data about what happened in closing stage of the LIP

**Table 4.2:** *Project documents and their relevance*

#### **4.2.5 Choice of tools**

In obtaining the project documents; secondary data, the relevant organisations that have been identified as the source of them will directly provide the documents. The organisations are Bureau for Public Enterprise of Nigeria (BPEN) and the Budget Monitoring and Price Intelligence Unit (BMPIU). On the other hand, to obtain primary data, it means that we will need to either use; questionnaires focus groups, interviews or a combination of them.

With interviews, it will be possible to ensure that interactional recording can take place in the field by use of audio recorders during interviews to allow the interviewer collect rich data, whereas, with questionnaires such possibilities are eliminated (Woodring, et al 2006). However, open-ended questionnaires could also be a source of rich data (William 1993). But, due to poor return rate to paper questionnaires during the pilot study carried out in this research in Nigeria with senior management, sponsors and consultants it is too risky for this research to depend on open questionnaires. The other questionnaire distribution forms available include; telephone or web based questionnaires. The web-based questionnaire is not really feasible for this research because reliable access to Internet is very scarce in Nigeria while telephone-based questionnaires will have to rely on the respondent being free and interested enough to focus on the questionnaire to give reliable response. Results from the pilot study suggests that there is likelihood that the senior management staff in LIPs will not give dedicated attention to the telephone interviews especially if they are busy managing several projects. Also due to lack of

physical interaction during telephone conversation, the respondents are likely to be less engaged and we cannot deduce much from their body language. Besides, many of the participants during the pilot study suggested that they could not find time to complete it but evidence show that they could not border themselves with completing it as the same people were able to sit through an hour long personal interview. Therefore, the use of telephone, web-based or paper questionnaires are unlikely to generate reliable and meaningful exploratory data if used in the main data collection exercise; thus, questionnaire will not be used for this research.

Consequently, we are left with the options of interviews and focus groups. Focus group meetings entails gathering the respondents for each project together; either physically or by conference calling; to be able to identify the differences and similarities in their opinions and could be a good option because of the following advantages (Woodring, et al 2006):

- They are useful to obtain detailed information about personal and group feelings, perceptions and opinions
- They can save time and money compared to individual interviews
- They can provide a broader range of information
- They offer the opportunity to seek clarification
- They provide useful material e.g. quotes for public relations publication and presentations

Being that these are busy people and could be working on the same projects, it will be difficult to gather all of them and even more difficult to avoid their responses being biased by the presence of other colleagues or competitors in the field; as they may have sensitive information to give. Also the confidentiality and anonymity of the respondents cannot be guaranteed using this technique. Therefore, the focus groups are not a good option to be used in the data collection exercise.

Due to the exploratory nature of this research in exploring the relationship between adhering to PG principles and success of LIPs in Nigeria, it is vital to gather as much relevant information as available to this research. Hence,

using interviews; especially personal; is very suitable for this research. The advantage of using the personal interview technique is that it allows the interviewer to clarify unclear responses and allows more rapport between them and the respondent. However, it has the disadvantage of generate a lot of work, which can make the coding, and analysis of the data difficult and time consuming; especially with the research having time constraints. Interviews can also provide structured, semi-structured and unstructured approaches depending on how much data is needed and the analytical technique that is to deploy (William 1993). The unstructured interview may provide access to more details but at the same time could produce data that are irrelevant to the research objective, thus creating large volume of data to be analysed (William 1993). The structured interview on the other hand can limit the amount of information to the size desired but can also restrict the interviewer from collecting other relevant information that has not been included in the original questions (Kvale 1996). Therefore a combination of these two types of interview tools will produce a good balance to explore their advantages and eliminate their disadvantages; this type of interview is called the semi-structured interview (Kvale 1996).

Interviews can also be conducted through the telephone to reduce cost as well as ensure that more interviews can take place in a shorter time, as travel time will be eliminated using. However, the telephone interview can also be expensive due to calling rates. Also, interaction levels between interviewer and respondent will be less than in personal interview and interruption in conversations may affect the interview due to poor telephone network service. Therefore, telephone interviews are not a very good option for this research.

In summary, it is clear from the above evaluation of the options available to this research for collection of suitable data that, semi-structured personal interviews will be the most suited options to supplement the documents that will be collected from projects. This will save cost and time for this process whilst ensuring that rich and reliable data is collected. The semi-structured personal interviews will be used to investigate the relationship between

performance of LIPs and their adherence to project governance principles. Senior management staff of owner, contractor, consultants organisation involved in the decision making process of each project will be interviewed. The selection and the number of personnel to be interviewed for each of the LIPs will be based on their level of relevance in the project and availability during the progression of this research, as most of them are expected to have busy schedules. See table 4.3 for some of the questions that will be used in the interviews and how they were formulated.

<b>Themes</b>	<b>Relevant Interview questions</b>
The board/steering committee has overall responsibility for governance of project management.	Who has/had the overall responsibility for making decision and governing the project?
The roles, responsibilities and performance criteria for the governance of project management are clearly defined.	Did you get told your roles, responsibility and KPIs in the governance committee? If yes, how was this communicated to you?
Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.	What level of monitoring, control and structured directing was applied throughout the project and how was this achieved?
A coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio.	What was the relationship between the portfolio of this project and the strategic goal of this organisation?
All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.	Was there a plan for the project? If yes, were there any review and authorisation points and how well did this run during this project? Was review decisions recorded and communicated properly?
Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.	Were the members of all delegated authorisation bodies (stakeholders) represented in project steering committee? If yes, did they have the competence, resources and authority to make appropriate decisions?

**Table 4.3a:** Semi Structured Interview Questions Formation

<b>Themes</b>	<b>Relevant Interview questions</b>
The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.	Was there realistic information provided in support of the justification for the project at the approval point? If yes what were these information?
The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.	Did the steering committee have or delegate to anybody the authority to decide when independent scrutiny of project and the management system should be done? If yes did they use it in this project?
There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.	Was there a project status, risk/issue escalation reporting criteria? If yes, please can you run us through the much you remember?
The organisation fosters a culture of improvement and of frank internal disclosure of project information.	Was there a clearly defined information disclosure guide for the project? If yes, How regular was information disclosed in this project and through what media.
Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.	What was the level of each project stakeholder's engagement with the project? And what were the criteria for this?
Projects are closed when they are no longer justified as part of the organisation's portfolio	What would be the decision on the project if it is no longer justified as part of the portfolio and objective of this organisation? How will this be done?
13. Project Performance	What was the original cost and time estimation and what was the actual duration and cost of the project?

**Table 4.3b: Semi Structured Interview Questions Formation**

In addition, just as identified after evaluation of several options for generating data for this research, similar research that explored the importance of PG and examined its adherence all used semi-structured interviews. William et al (2009) used semi-structured interviews reinforced by pre-supplied questionnaires but conducted the research with organisations that have very high need for confidentiality of the project documents so could not be granted access to any secondary data (see William et al 2009). This suggests that

these techniques can be suitable for data collection in this area but if access to documents is possible then that could also be a possible source. However, Bekker et al (2008) used both primary case (personal interviews and nominal group technique) and secondary data (sourced from literature and their performance evaluated against the principles of the CPGF) for his research on the impact of project governance principles on project performance. The research had access to a lot of data from websites, which contained relevant data to help in the study of fifteen projects cases, hence the use of secondary data but used primary data study in two cases where they had access to in-depth personal interviews. Thus, considering that this research has access to documents related to projects this would be a good source of data to support the data from semi-structured personal interviews.

Project governance could also represent different meanings to different members of the project. For example the following project participants can perceive project governance as the following: See subsection 3.

The implication of this is that when the different participants are asked about the practice of good project governance directly their understanding of this is not likely to be the same. Therefore, it will be more productive to ask them indirectly.

#### **4.2.6 Access to respondents and data**

For the project documents, the Bureau for Public Enterprise of Nigeria (BPEN) as well as the Budget Monitoring and Price Intelligence Unit (BMPIU) has agreed to provide this research with any relevant non-confidential document needed about public sector LIPs in Nigeria. This agreement was reached and confirmed by a senior management staff in each of the organisation. They were contacted during the pilot study of this research and informed of the research aim, which they were satisfied with, thus consented to participate in the data collection exercise. Besides, if during the data collection process, any other organisation agrees to provide a relevant document, then that will be accepted too. Moreover, most LIPs in Nigeria are public sector or Private-Public Partnership projects and are supervised by

the two main organisations identified as the secondary data source. Therefore, there is a good chance of getting most relevant public sector LIP documents from them.

On the other hand, to be able to conduct the primary data collection, access to the appropriate personnel involved in the management of the LIPs to be studied is crucial. This may involve access to highly placed and busy people. In order to make sure of their availability and willingness to participate, some of these personnel have been contacted by email and phone beforehand to ask for their consent and the following points were made clear to them:

- The research aim; strictly for academic purposes
- The desired level of access; no personal details of role in project
- Guaranteeing confidentiality of information they provide
- Guaranteeing anonymity of information they provide
- Providing them access to the findings of the research
- Access to the interview transcript if they wish

So far, the contacted prospective respondents have all given their consent to participate in the research by email.

#### **4.2.7 Research Strategy**

##### **Research strategy**

This research as pointed in sub-section 4.2.1 needs to examine LIPs in Nigeria to identify the level of adherence to PG principles, the level of performance of the LIPs in meeting their original estimations and expectations then investigate the relationship between the two factors identified. Besides, two categories of LIPs that need to be studied were identified in sub-section 4.2.2. For each of these categories, a minimum of two LIPs will be studied as cases for answering the research question and both primary and secondary data will be sourced during the data collection process from individuals and organisations. Therefore, this type of research approach can be considered as a case study research.

Zucker (2009) after reviewing several definitions of case study; (Stone, 1978; Benbasat, 1984; Yin, 1984; Bonoma, 1985 and Kaplan, 1985) in Benbasat et al. (1987, p.370), comprehensively concluded that:

*“A case study examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities (people, groups or organizations). The boundaries of the phenomenon are not clearly evident at the outset of the research and no experimental control or manipulation is used.”*

Yin (1994) further describes case study saying;

*“The unit of analysis can vary from an individual to a corporation. While there is utility in applying this method retrospectively, it is most often used prospectively. Data come largely from documentation, archival records, interviews, direct observations, participant observation and physical artifacts”*

The case study research can make use of single or multiple cases (Lee, 1989). This research having found it necessary to use a minimum of two LIPs cases in each project categories, will have a minimum of four cases thus is making use of multiple cases. This will allow this research to explore more about the relationship between adherences to PG principle and LIP performances by identifying if there is any consistent pattern in the studied cases. Furthermore, having multiple cases in a case study research generally makes the findings more valid and more generalizable than using a single case which can be restrictive (see e.g. Lee, 1989).

William et al (2009) and Bekker et al (2008), conducted a similar research as this research in the area of PG relationship with project performance and they both used case study research in their work. Even though their research was not carried out in Nigeria but the nature and focus of the study was the motive behind the choice of case study as a research approach. Hence, it is also rational to follow the same approach in this research. Furthermore, William et al (2009) studied four cases; two in Norway and two in United Kingdom; as he tried to study the impact of PG adherence on performance using the two countries as samples; making it a multiple case study. Similarly, Bekker et al (2008) studied two primary cases and fifteen secondary cases in their work, which also depicts a multiple case study. Therefore, the choice of this research to follow multiple case studies can be considered to be in line



with similar researches in the area conducted by major contributors in PG study.

#### **4.2.8 The Research Approach**

**The research approach** for this study was inductive. This approach was chosen over the deductive approach as this research sort to use an explorative method rather than confirmatory. There was no hypothesis formed based on the information available in the literature thus, the making of research questions. To effectively answer the questions, it was essential to explore, as there was no hypothesis to confirm. Therefore with the explorative method, it was appropriate to work from the large data generated from the explorative survey to a more specific answer to the research questions.

Thus, three sets of data was collected using three stages namely:

1. Pre-interview form on the LIPs PM common practices
2. Semi-structured interviews on the LIPs performance and adherence to PGPs
3. Open-ended/unstructured interview on LIPs activities in general from start to closure

Each of these stages produced data that is useful for cross verifying the results.

#### **Summary**

In summary, the approach detailed above for carrying out this research typifies a case study research design. Case study research can investigate a specific group, person, organisation in a single or multiple cases and this research is more suited by multiple case studies. This case study research will take a positivist approach in viewing the data collected as against the option of interpretivist or realist approach.

## 4.3 Data analysis

### 4.3.1 Coding and developing category systems

The following criteria will be used to measure the performance of LIPs in terms of meeting the project constraints; cost, time, scope and expected deliverables:

- **Low** = If the originally specified project scope, time, expectations or cost are not met by a deviation of over 40%, then the performance of the LIP will be considered as low.
- **Medium** = If the originally specified project scope, time, expectations or cost are not met by a deviation of over 10% but less than 39%, then the performance of the LIP will be considered as medium.
- **High** = If the originally specified project scope, time, expectations or cost are met or not met by a deviation of equal or less than 10%, then the performance of the LIP will be considered as high.

The following criteria will be used to measure the performance of LIPs in terms of failure, average or successful:

- **Poor** = If the cost, time expectation on deliverables and scope performance are all low or/and medium
- **Average** = If the performance in meeting one or two of the project constraints (cost, time, scope and expected deliverables) is high while the remainder are low or/and medium
- **High** = If the performance of all the project constraints are high

Also, for measure of adherence to PG principles, **Yes** or **No** will be used:

(Evidence = consistent/relevant statements amongst respondents and documents)

- **Yes** – When the data suggests an adherence to a given PG principle and are supported with sufficient evidence of PG practices during the LIP lifecycle

- **No** – When the data suggests a lack of adherence to a given PG principle and are supported with sufficient evidence of PG practices during the LIP lifecycle

This research will make use of audio recorders during the interviews. The recorded interviews will be transcribed into word documents and then analysed alongside the LIP documents that will be gathered during the data collection process. To analyse these documents, qualitative analysis will be used, as the data itself is qualitative. The Nvivo qualitative data analysis software will be used as it is very popular in qualitative analysis and has been prior studied thus will save time in the analysis as against having to learn how to use other similar qualitative analysis software such as ATLAS, AnSWR or manually coding and doing ethnography.

The following steps will be followed in organising the data:

1. **Storing:** The word documents will be saved on a computer.
2. **Coding:**
  - a. The responses from each respondent will be read carefully to identify segments, which suggest certain analytical meaning; these segments will be labelled accordingly. This activity is referred to as coding and the labelled segments codes.
  - b. Each of the codes will be further reviewed to ensure that the label assigned is appropriate to the theme of the segment. After this, the codes that have the same theme but have been assigned different labels will be re-labelled for the ease of grouping later in the process. Other segments that represent more than one theme will be assigned the two or more respective codes associated with it. Such codes will be referred to as co-occurring codes. The codes from the first data coded will be re-applied to subsequent data so that different codes are not assigned to related themes thus, making it easier to categorise codes later on in the process.
  - c. A comprehensive list of all the codes will then be formed and stored in the Nvivo software.

### **3. Categorising of codes:**

- a. After the initial coding, the codes will then be classified into different categories based on how they relate to the PG principles and LIPs performance metrics (cost, time, scope and satisfying expectations). For example codes that are related to the lack of stakeholders engagement during the LIP will all be grouped together so that it will be easier to review what different respondents; in a given LIP case; suggests.
- b. The next will be to identify the performances of each of the investigated LIPs by using basic percentages calculation to identify the percentage to which each project constraint performs against the planned value. So for the performance on cost, the difference between the actual cost and the planned budget will be divided by the planned budget and the result multiplied by hundred to get the performance in percentage (see equation 4.1). The same will be done for time and scope while the satisfaction level with respect to expectations of the project deliverables will be questioned directly, so no need for any calculation. In a case where different responses are gotten about the performance of an LIP; in terms of meeting original time estimation for instance; other factors such as behavioural hints during response and access respondent has to information, will be used to decide whether the response is to be taken or discarded. The LIPs performances in meeting set expectations of the project will be matched on a table to their respective adherence governance principles. The percentages will then be used to class the performance in each LIP into low, medium or high. This will be repeated for each of the LIPs; these will be shown on a mapping table.

#### **4.3.2 Answering the research question**

The following steps were followed in making sense of the data and answering the research questions:

1. **Identify the PM common practices:** This was done by taking the highest number of responses (yes or no) from the pre-interview forms; about PM common practices; as the true PM practice in the LIP. Also, data from the third stage of the data collection; open discussions about the LIP activities in general; was used to support and verify the data from the pre-interview forms. Then the PM common practices that were identified as haven been adhered to are presented in a table for each of the LIPs.
2. **Identifying the performance of LIPs in meeting their original estimations/specification:** this was done by using the data from data collection stage two to identify the original and actual values of the cost, time and scope of the studied LIPs. Then the percentage overrun was calculated for cost, time and scope of each of the LIPs.
3. **Identifying the PG implementation structure, PG people and PG information disclosure of LIPs studied:** To achieve this, the data collected on each LIP were critically reviewed to identify consistencies in what the different respondents said about the implementation of a given PG principle during the lifecycle of the case LIP. This involved identifying how people were organised, who was accountable for what and how the PG flowed through the LIP lifecycle etc. Any inconsistent response(s); in terms of justification and evidence provided by respondent; was taken note of and considered in terms of whether the principle had been adhered to or had not.
4. **Identify the external factors that existed in the LIPs studied and their adverse impact on the LIPs:** this was done by using data from all three stages of the data collection to identify any political, economical, socio-cultural and technological factors that adversely impacted the LIPs.
5. **Examine the relationship between adherence to PGPs and adherence to PM common practices:** this was done using matrices to indicate the relationship category (strong, medium or weak) between the two adherence levels in the various LIPs. Then

the indication category that is predominant amongst most of the studied LIPs is used as the conclusive indicator to the strength and nature of the relationship between the two adherence levels.

6. **Examine the relationship between adherence to PGPs and performance of LIPs in meeting their original estimations/specifications:** this was done using matrices to indicate the relationship category (strong, medium or weak) between the adherence to PGPs and performance levels in the various LIPs in terms of original estimations/specifications. Then the indication category that is predominant amongst most of the studied LIPs is used as the conclusive indicator to the strength and nature of the relationship between the two.
7. **Examine the relationship between adherence to PGPs and the control of adverse external influences on the LIPs:** this was done using matrices to indicate the relationship category (strong, medium or weak) between the adherence to PGPs and control of the adverse impacts from external factors in the various LIPs. Then the indication category that is predominant amongst most of the studied LIPs is used as the conclusive indicator to the strength and nature of the relationship between the two.
8. **Triangulation of the three relationships between adherence to PGPs and LIPs outcome in steps 5, 6 and 7:** this will be done by examining if the three relationships are in support of one another or not. Triangulation is a social science data analysis technique normally used for validating data by cross verifying data from two or more sources so that the conclusions drawn is more credible (Bogdan and Biklen, 2006). Thus, issues such as biases to a single theory or method of making sense of the data are eliminated using triangulation.
9. **Conclude the findings of the research and answer the research question**

### 4.3.3 Data collection SWOT analysis

#### **Strengths**

The data collection approach ensured that different sources of data are collected. This implies that the data can be verified thus making the data set more reliability. The collection of data from more than one LIP and from more than one LIP type ensured that the data is not biased to a single practice and opinions from one LIP. Instead the different LIPs provide a situation where the findings can be more generalizable.

#### **Weakness**

The data collected could have been more generalizable if it was from more LIPs. It also could have been more transferable if it was from more than one developing economy.

#### **Opportunities**

The data collection being divided into three stages creates an opportunity for the findings to be verified and provides a backup in case of any inconsistencies in the data from one source. The sample size provides an opportunity for a rich data to be collected, which in turn means reliable findings.

#### **Threats**

A number of outcomes are possible in the process of carrying out this study and it is important to assess all the possible risks, obstacles and circumstances that may obstruct the objectives of this study. Hence this section is dedicated to achieving this purpose. Below is a list of possible limitations and there mitigating solution:

**Respondents being worried about getting into trouble with their employer, contractor or client as a result of the response they give hence they could provide limited information**

The investigated projects and respondents were assured of their anonymity and clearly informed that the data collected from the study were used strictly for academic purposes. They will also be promised confidentiality so that they do not need to worry about anyone knowing about their response. However to ensure that they respondents anonymity and confidentiality is maintained, the interviews were held in areas chosen by the respondent and their personal details will not be collected.

**People who worked on the investigated projects may not be available to participate in survey due to retirement, choice or tight schedules**

Contacts of necessary respondents that were involved in an LIP but no longer work in the organisation were collected if possible. They were contacted afterward but in a case where the person cannot be reached due to death or no available contact information, then an alternative person that could have the relevant knowledge about the project were asked to participate. In the case of tight schedules, appointments were booked for a later date when the respondents were available to participate in the study. Finally if they choose not to participate an alternative person that has the relevant knowledge were contacted.

**Respondents may be unclear on questions and provide irrelevant responses**

The following points had to be observed when designing the interview in order to ensure that the respondents give an accurate response rather than a response biased by poor interview design. These points include; ensuring that all questions are absolutely relevant, making use of simple words to ensure the respondents will understand what is being asked, putting the easy and interesting questions first, avoiding using leading questions, making use of mediated scales to accommodate all views and not giving too many answer options as this may make it difficult for respondents to make a choice. Other points that must be observed include, putting the questions in a logical order so that respondents view is not influenced by a previous question,



making the purpose of the interview clear to the respondent at the beginning of the interview.

**Respondents could overestimate or underestimate their response to certain questions in an effort to impress the researcher or hide the truth respectively**

To avoid getting respondents into a need to say what the researcher wants to hear or give anything short of the accurate response, the interview questions were flexible to allow more clarity on responses received. This will entail the use of semi-structured interviewing approach and the questions must be indirect and emotionally neutral. For example no questions were asked about respondent's involvement with corruption or their contribution to project failure.

Other considerations that were made while designing the questionnaire includes:

- Ensuring that all questions are absolutely relevant
- Making use of simple words to ensure the respondents will understand what is being asked
- Putting the easy and interesting questions first
- Avoiding using leading questions
- Making use of mediated scales to accommodate all views and not giving too many answer options as this may make it difficult for respondents to make a choice
- Putting the questions in a logical order so that respondents view is not influenced by a previous question

#### **4.3.4 Research Strategy Review**

The strategic taken for this research is in view to provide conditions that will ensure that the findings of this research are as accurate and reliable as possible. For data needed to answer the research question, survey of six LIPs or cases were conducted and studied to identify the outcomes of the LIPs as well as the adherence to PG principles. In terms of analysing the data, the theory triangulation was used to cross verify the indications shown between adherence to PG principles and the outcomes of the LIPs. Finally

the following considerations have been made towards ensuring that the entire process is ethical and reliable:

1. The findings of the research were studied in much detail to identify any relationship between social, economic, political, educational, cultural conditions and the issues that projects experience in order to ensure validity.
2. Following the ethical guideline for research set by the university of Bradford to ensure the findings of this research are credible and the process protects the emotional and social security of respondents.
3. In order to make the findings of this research dependable, every detail on what approaches and methods used in collecting and analysing data were documented accurately; this will ensure that another researcher can arrive at the similar findings using the same methods and under the same circumstances.

#### 4.4 Summary

Due to limitations in time and cost, it is very important that this research avoid expensive and complex and lengthy activities in order to work within the limited available resources to this effect the choice of project documents reviews and semi-structure personal interviews as source of data for this research was made. Interviews provide the possibility to access in-depth details but within a short and control time frame thus making it a good choice for the study while the documents provides a strong basis to examine the LIPs more closely. Besides, the choice of investigating a minimum of six LIP cases if possible, emphasises the need for this research to be able to identify any relationships between the LIP performance and their adherence to PGPs. The philosophy of this research is positivist rather than interpretative or realist as it seeks to explore specific relationships using case study approach within limited duration and funding. The LIP cases to be studied were selected on the basis of their access and availability of the participants needed in this research. Furthermore, accesses to the prospective participants from Nigeria LIPs were easier because of already establish contact with the relevant organisations, as against using other developing economies where access to respondents could be an issue; hence, the focus of the LIPs selection on Nigerian ones. In the analysis of data, the project documents were analysed by coding phrases/sentences/paragraphs, categorizing the codes, putting the codes in hierarchies, representing results using tables, figures and maps. The choice of theory triangulation in cross verifying the findings is made to increase the chances of identifying regular pattern in the study. is made in order to provide a clear and logical basis for examining the relationship between PG principles adherence and performance in each of the projects, relationship between PG principles adherence and PM practices adherence as well as PG principles to PG principle adherence. Also several ethical considerations were made to ensure that the findings of this research are accurate, reliable, credible, transferable and durable at the end. The findings of this case study research will contribute knowledge in the area of LIP project management and may be

transferable to LIPs in other developing countries as Nigeria represents most of the conditions seen in most developing countries.

**CHAPTER 5.0**  
EVALUATING THE ADHERENCE LEVELS TO PROJECT  
GOVERNANCE PRINCIPLES, PROJECT MANAGEMENT  
COMMON PRACTICES AND LIP PERFORMANCE FROM THE  
DATA COLLECTED

## **5.1 Introduction**

This chapter presents the data generated from the data collection exercise. Section 5.1 presents the overview of data collected; stages and processes used to collect the data as well as the demographical composition of the data collected. In section 5.2, 5.3 and 5.4; the performance of the LIPs in meeting their original estimations, the adherence levels to PGPs and the adherence to PM common practices were examined and presented respectively. Finally, section 5.5 provides a summary to all the discussions in this chapter.

## **5.2 Overview of the data collected**

### **5.2.1 Data collection process**

The data collection was in accordance to the process outlined in chapter four; methodology. The data collection process was driven by three factors; the scale and goal of the projects; availability and access to respondents and the quality of data collected from the respondents.

In order to achieve the objectives of the research, six LIPs were selected based on the criteria listed above and four respondents were identified from the organisations that were involved in the LIP delivery; consultant, owner, beneficiary and contractor/supplier. Each of these five categories of respondents was interviewed for each of the respective LIPs.

In order to ensure that the data collected was sufficient to reach meaningful conclusions to the research questions, the data collection process was divided into three stages.

The first stage was to send a pre-interview form by email for the prospective respondents to complete with the aim of informing the research about the PM practices during the delivery of the LIPs. The form was structured as a list of practices and the respondents were asked to tick the practices that they are aware of taking place during the life cycle of the LIP. The form had no option for the respondents to put in further comments. The data generated from this stage helped in the finalizing of the interview questions to be asked with

respect to the respective PG principles by highlighting areas of weak/strong PG practices in the LIPs. This stage also provided a hint on how informed the prospective respondents are about PG principles.

The interviews were conducted face to face with the respondents. For each respondent's consent was requested for the interview to be recorded using a digital recorder. The physical, voice and other gestural behaviour shown by the respondents during the interviews were taken note of as the interview progressed and were documented. The interview was in three sections; semi-structured questions about the PG practices in the LIPs; unstructured questions about the performance of the LIP and the general practices during the lifecycle of the LIP; the last section focuses on the demographical information about the respondents.

The third stage of the data collection process; gathering of LIP report documents from the six LIPs through the appropriate organisations and government agencies; produced project plans for five LIPs as well as four other general reports related to the studied LIPs.

### 5.2.2 Interpreting the data using codes

The data collection produced four sets of data; these include;

1. Structured quantitative data from pre-interview forms
2. Voice recording and notes from semi structured interview of respondents about PG principles
3. Voice recording and notes from unstructured interview of respondents about LIP performance
4. Project plans and other relevant reports on the studied LIPs

The following steps were followed in organising the data:

1. **Transcription:** The voice recordings were transcribed using voice to text conversion software after each interview and was checked for errors by checking the voice against what was transcribed by software

2. **Arranging the data:** The notes generated during interview and sections of secondary data collected were attached to the related section of the interview transcription and interviews saved in relation to the LIPs. For example, interview responses on roles and responsibility of PG governance body are grouped together with notes from interviews and text from secondary data relating to roles and responsibility of PG governance body.
3. **Coding the data:**
  - a. The responses from each respondent were read carefully to identify segments, which suggest certain meaning; these segments were coded accordingly.
  - b. Each of the codes was further reviewed to ensure that the label assigned was appropriate to the theme of the segment. After this, the codes that had the same theme but had been assigned different labels were re-labelled for the ease of grouping later in the process. Other segments that represented more than one theme were assigned the two or more respective codes associated with them. Such codes were referred to as co-occurring codes. The codes from the first data coded were re-applied to subsequent data
  - c. A comprehensive list of all the codes were formed and stored in the Nvivo software.
4. **Categorising of codes:**
  - a. After the initial coding, the codes were classified into different categories based on how they related to the PG principles and LIPs performance metrics (cost, time, scope and satisfying expectations). For example codes that were related to the lack of stakeholders engagement during the LIP were all grouped together so that it was easier to review what different respondents; in a given LIP case; suggests. The combination of codes into categories was done using the logical combination operators in Nvivo analytical software (IF, THEN, NOT, OR).
  - b. Codes that relate to one category were further divided into smaller classes inside the category. For instance, the cost



category was further divided into under budget, on budget and over budget. Furthermore, the over budget was divided into low overruns, medium overruns and high overruns.

- c. The next task was to identify the performances of each of the investigated LIPs to identify the percentage to which each project constraint performed against the planned value. So for the performance on cost, the difference between the actual cost and the planned budget was calculated as a percentage. The same was done for time and scope. In the case where dissimilar responses were identified on the performance of an LIP; in terms of actual and estimated values of cost and time; other factors such as notes on the behavioural hints during response and the level of access respondent had to the project documentations was used to decide which of the response was to taken or discarded. The LIPs performances in meeting set expectations of the project were matched on a table to their respective adherence governance principles. The calculated percentages were used to class the cost, time and scope performance of each LIP into, low medium or high and subsequently into failed, average or successful performed LIP. The results are shown using cross tabulation of the LIP performances against their adherence to PG principles as well as column charts.

The steps listed in section 4.3.1 were followed as necessary steps for answering the research questions.

### **5.2.3 Demographical analysis of respondents**

The third section of the interview was focused on the demographical information of the respondents; gender, age, number of years project experience, respondent's organisations (ownership), position of authority in LIPs and project sponsorship. Table 5.1 presents the demographical result collected from the interviews. The result indicates a 3.3% (N = 1) of female respondents as against 96% (29) of male respondents. This may be for a

number of reasons; due to the low involvement of females in construction related careers in Nigeria or low proportion of female in supervisory positions and above etc. The details of why there is a low proportion of female will be expanded on in later sections in chapter six.

The age group with the most number of respondents was age group 36 to 45 (N=13) and 46 to 55 (N=10). The age group of 25 or less, 56 or over and 26 to 35 had fewer respondents. This could be due to the fact that the level of involvement in decision making and governance of the LIPs meant that managers and directors were the ones most suitable to interview and they are more likely to fall between the age range of 36 and 55. Moreover, if a respondent was not involved in a supervisory role and above their response were considered as invalid as they were less likely to be informed about the governance practices in the LIP.

Table 5.1 shows the demographical detail of the respondents that participated in this study.

Categories	Descriptor	Count (N)	%
Gender	Male	29	96.7
	Female	1	3.3
Age	25 or less	1	3.3
	26 to 35	4	13.3
	36 to 45	13	43.3
	46 to 55	10	33.3
	56 Or above	2	6.7
Number of years Project Experience	5 or less	4	13.3
	6 to 15	9	30.0
	16 to 25	6	20.0
	26 or over	11	36.7
Highest Educational Qualification	GCSE/A-Level	0	0.0
	Diploma/Certifications	1	3.3
	First degree	18	60.0
	Masters degree	9	30.0
	PhD	2	6.7
Respondent's Organisations (ownership)	Government Agency	13	43.3
	Private local	8	26.7
	Private foreign	9	30.0
Position of authority in LIP	Junior staff	0	0.0
	Supervisory	6	20.0
	Managerial	12	40.0
	Director/Board	12	40.0
Project Sponsorship	Public sector	5	83.3
	Private sector	0	0.0
	PPP	1	16.7

**Table 5.1: Demographical information of respondents**

On the years of experience of the respondents working on LIP, most of the respondents had 26 or more years of experience (N=11). The second largest group of respondents for experience working in LIP is the 6 to 15 years (N=9) followed by the 16 to 25 years (N=6), then the 5 years or less (N=4). The importance of a respondent having experience working on LIPs for 5 years and over is that they can provide a more detailed and informed response about what happened in an LIP.

The educational qualification group with the highest number of respondents is the first-degree group (N=18), followed by the master's degree group (N=9). The respondents in general have to have a good level of education to carry out their governance roles in the LIP hence; the majority of respondents came from these two groups. Further details about the reason behind this numbers will be discussed in later sections of chapter six. The other groups GCSE/A-Level (N=0), Diploma/Certification (N=1), and PhD (N=2) were all with low number of respondent and the reason behind that will be explored later in chapter six.

Most of the respondents were from government agencies and departments (N=13). The second highest group of respondents were from foreign private organisations (N=9). Finally, the third group; respondents from local private; got the lowest number of respondents (N=8). The proportional distribution in this category can be attributed to the scale of the projects, which means that large sponsorship is required hence the large involvement of government and foreign private organisation. This will be discussed in more detail later in chapter six.

In the category of respondent's position of authority in LIPs, those in managerial positions such as Project Manager; are 40% of the total respondents (N=12) and those that are directors or members of project board also takes up 40% of the total respondents. The remaining 20% of the respondents participated in a supervisory role in the LIPs while there were 0% of junior workers amongst the respondents. This proportion represents the right category of respondents required for this study as a high level of

involvement in the LIPs is important in order that the governance practices can be examined.

Finally the six LIPs studied were all public sector sponsored; in full or in part; five LIPs were fully sponsored by public sector; government and agencies; while the remaining one was Public-Private Partnership Project.

#### **5.2.4 Authority of the respondents**

##### **The project owners/sponsors**

All six project sponsor organisations members for the six LIPs that were studied were represented by directors in the organisations. The six directors were all educated to masters' degree level from recognized institutions across the globe and had over 20 years of experience working in LIPs.

##### **The project beneficiaries**

The beneficiaries of the six LIPs studied, all had more than five years' experience in LIP and had university education to degree level. They were all holders of managerial or board of directors positions in their respective organisations.

##### **The project consultants**

The LIP consulting organisations representatives that participated in the data collection exercise were all university graduates; three were educated to masters' degree, two to PhD level and one to bachelors; the only consultant who was educated to bachelor's degree had 35 years of experience working on LIPs which makes his knowledge and contributions very valuable and as significant as the other consultants. All six consultants were also involved in their respective LIPs decision-making structure, either in managerial or board level.

##### **The project contractors**

The representatives of the six contractor organisations were all university graduates. The six of them held managerial positions in their respective

organisations and were involved in the project board/steering committee of the respective LIPs their organisation was involved in and all have had over 20 years of experience working on LIPs.

## **Summary**

The quality of respondents for the data generation met the requirement of this research in ensuring the data collected is from credible sources which can provide dependable data. The respondents have the right level of education to understand the technical and policy related activities in the studied LIPs. The positions held by the respondents both in project capacity and in their respective organisations are all senior management and above thus, they have good knowledge of what happened in the LIPs. Finally, the demographics shows that the respondents all have long years of experience in the field which suggests that they should have good understanding of the questions posed to them and provide responses that gives a more holistic picture of the LIPs activities than if they had little experience in the field

### **5.2.5 Response Rate**

At the initial stage, twenty-nine respondents out of the thirty issued with the pre-interview forms fully completed and returned them. However, later on during the interview process the identified respondent who did not return his pre-interview form nominated another person in his organisation who completed the form. Thus, all twenty-four respondents completed the form giving a 100% response rate.

The LIP report documents collection stage returned nine documents relating to five of the LIPs. However, the only LIP with no report on it was a Public sector LIP (LIP1). The reason provided by the organisation for not providing any documents was that the documents relating to the LIP couldn't be located. The impact of the absence of any documentation on this LIP will be discussed later in this chapter.

### 5.3 Performance and adherence measure

#### Performance of LIPs in meeting original estimations and specifications

**Poor** = when all **three** of the performance attributes (cost, duration and scope) have a variance/overrun of more than 10%

**Satisfactory** = when **two** of the performance attributes (cost, duration and scope) have a variance/overrun of more than 10%

**Excellent** = when **one or none** of the performance attributes (cost, duration and scope) have a variance/overrun of more than 10%

#### Adherence to PG principles and PM common practices

**Weak** = when 30% or less of the PG principles or PM common practices relating to a certain governance or management category, (Governance = Structure, people and information. Management = Initiating, planning, executing and closing) are adhered to.

**Medium** = when principles or practices adhered to is between 30% and 60%

**Strong** = when principles and practices adhered to is more than 60%

#### 5.3.1 Identifying the performances of the LIPs in meeting their original specifications/estimations

LIP	% Overrun from original spec			Performance
	Cost	Duration	Scope	Based on definition in this study
LIP1	46.3%	110%	20%	Poor
LIP2	7%	0%	9%	Excellent
LIP3	200%	100%	70%	Poor ( <b>Abandoned</b> )
LIP4	27.8%	30%	9%	Satisfactory
LIP5	4%	0%	0%	Excellent
LIP6	66.7%	10%	23%	Satisfactory

**Table 5.2: LIPs performance table**

The project owners, contractors and consultants were asked about the performance of the LIPs in meeting their original cost, time and scope estimations. During the interviews, they above mentioned respondents were

asked to provide the original values estimated and the final actual values that the LIPs had at the end of the project lifecycle.

In LIPs 1, 2, 4, 5 and 6 the respondents all gave the same or very close values while in LIP 3 they respondents had very large variance in the values provided. However, all the values for LIP 3 had similar overrun values, hence an average of all the overruns were taken to give the percentage overruns shown for LIP 3 in table 5.2 above. The percentage overruns were calculated by subtracting the estimated values from the actual values to get the overrun value. The scope overrun was calculated using the number of originally set deliverables as estimated value and the number of final delivered deliverables (scope creeping) as actual value. The number of deliverables delivered differently to what was originally specified as well as the number of extra deliverables added outside of the originally specified project boundaries and requirements are considered as scope overruns.

LIP 1 had a 46.3% overrun for cost, 110% overrun for duration and 20% overrun for scope. This shows that the performance of LIP 1 in meeting the original estimations is poor as all three constraints; cost, duration and scope had an overrun more than 10% of the originally estimated value.

LIP 2 had a 7% overrun for cost, 0% overrun for duration and 9% overrun for scope. This shows that the performance of LIP 1 in meeting the original estimations is excellent as all three constraints; cost, duration and scope had an overrun of less than 10% of the originally estimated value.

LIP 3 had a 200% overrun for cost, 100% overrun for duration and 70% overrun for scope. This shows that the performance of LIP 1 in meeting the original estimations is poor as all three constraints; cost, duration and scope had an overrun more than 10% of the originally estimated value.

LIP 4 had a 27.8% overrun for cost, 30% overrun for duration and 9% overrun for scope. This shows that the performance of LIP 1 in meeting the original estimations is satisfactory as only two out of the three constraints; cost, duration and scope had an overrun more than 10% of the originally estimated value.

LIP 5 had a 4% overrun for cost, 0% overrun for duration and 9% overrun for scope. This shows that the performance of LIP 5 in meeting the original estimations is excellent as all three constraints; cost, duration and scope had an overrun less than 10% of the originally estimated value.

LIP 6 had a 66.7% overrun for cost, 10% overrun for duration and 23% overrun for scope. This shows that the performance of LIP 6 in meeting the original estimations is satisfactory as only two out of the three constraints; cost, duration and scope had an overrun more than 10% of the originally estimated value.

#### 5.4 Identifying the PM practices; initiating, planning, executing and controlling and closing of the LIPs

This section will identify the PM common practices that were applied as well as those not applied during the lifecycle of each of the six LIPs. Subsection 5.3.1 will discuss and identify the PM practices in the initiating, planning, executing/ monitoring and closing stages for LIP 1; as shown in the data collected. The next subsection will do the same for LIP 2 while the subsequent ones will do the same for LIP 3, LIP 4, LIP 5 and LIP 6 respectively. The discussions will be guided by data from the five respondents that participated in the questionnaire survey on PM practices, the LIP project plan document and data from the third stage of the data collection; open discussion about the general LIP activities that took place during the LIP lifecycle. The questionnaire used for this survey had options of “YES”, “NO” and “UNAWARE”. The respondents could only select one option.

Project stages	Survey Options (PM Practices)	Code
Initiation	Expectations were clearly defined	I1
	Scope and resource were estimated adequately	I2
	Choice of project was justified	I3
	Feasibility study was conducted	I4



<b>Planning</b>	Project scope was properly planned	P1
	Project scope was properly defined	P2
	Project activity was properly defined	P3
	Project activity sequencing was properly sequenced	P4
	Project resource planning was properly defined	P5
	Project activity duration was properly estimated	P6
	Project schedule development was properly defined	P7
	Project cost was properly estimated	P8
	Project cost budget was properly defined	P9
	Project plan development was clearly defined	P10
	Project quality planning was done properly	P11
	Project communications planning was done properly	P12
	Project risk were clearly identified	P13
	Project risk was clearly quantified	P14
	Project risk response was developed	P15
	Organisational Planning was done properly	P16
	Staff Acquisition was conducted on time where necessary	P17
	Procurement Planning was done properly	P18
	Solicitation Planning was properly done	P19
<b>Executing and Controlling</b>	Information was distributed often to all according to agreement	E1
	Team development activity took place	E2
	Quality assurance was properly conducted to plan	E3
	Scope was verified regularly	E4

	Solicitation was done when needed	E5
	Source selection was adequate	E6
	Contract administration was properly managed	E7
	Performance Reporting was according to plan	E8
	Overall Change Control was to plan	E9
	Scope change was properly controlled	E10
	Schedule Control were in place and were applied	E11
	Cost was properly controlled	E12
	Quality was properly controlled	E13
	Risk response was properly controlled	E14
<b>Closing</b>	Contract close-out was done at end of project	C1
	Administrative Closure was done at end of project	C2

**Table 5.3:** List of PM common practices and their respective stages and codes

#### 5.4.1 LIP 1

In LIP 1, all five respondents selected “NO” when asked if they think the common Project Management (PM) practices for the initiating stage were practiced in this project. Which suggests that all respondents agree that during the lifecycle of the LIP (I1), the expectations of stakeholders were not clearly defined, the project scope and resource were not estimated satisfactorily at the beginning of the project (I2), the choice of project with respect to other related projects was sufficiently justified (I3) and the feasibility study at the beginning of the project was either poorly conducted or not done at all (I4) (see table 5.3a). The information found in the project plan supports this as well as the some further responses obtained in the third stage of the data collection process; open discussion about the general activities that took place during the LIP lifecycle.

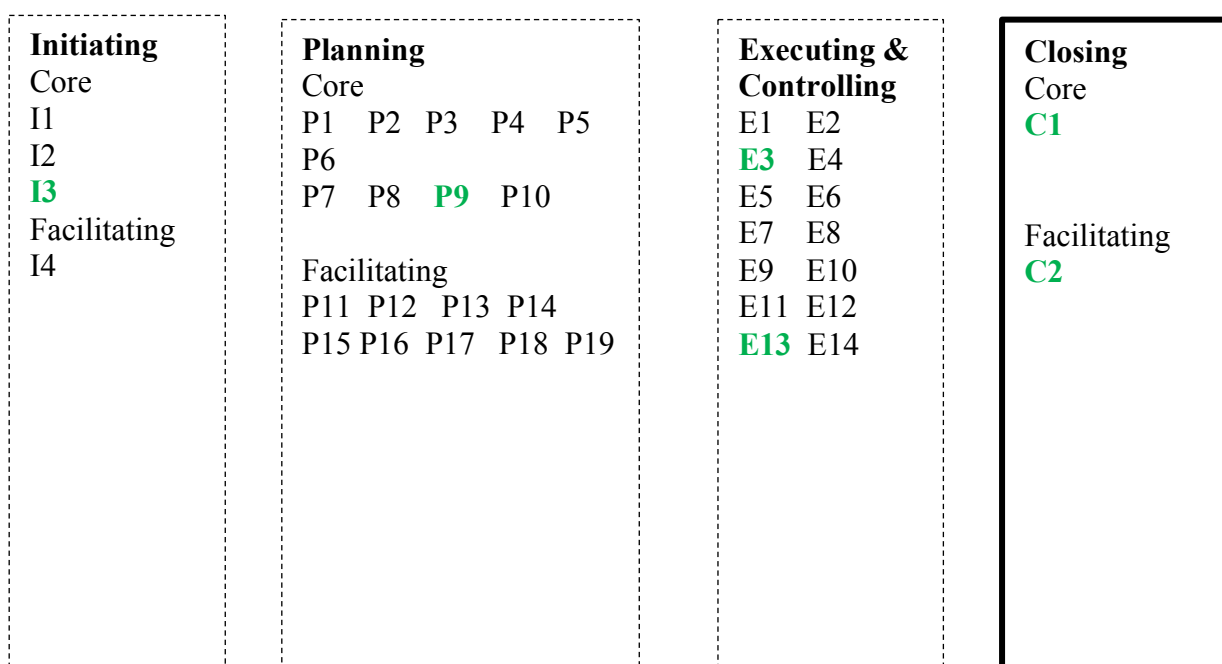
## Adherence to PM stage

### common practices

- Weak =-----
- Medium =———
- Strong =————

## Adherence to PM

- Adhered to = **Green colour**



**Figure 5.1a: LIP 1 Adherence to PM common practice**

The project business case clearly states the project alignment with the organisations strategy and need analysis. The project consultant representative reinforced this by saying:

*“.....the project was important of course. There was no tap water anywhere in the entire state thus, cutting off over 10 million people from clean water. The government’s decision to embark on this project was inevitable and the right thing to do too”*

This comment by the project consultant implies that LIP 1 was an important project and was in line with the organisations/governments strategy of providing basic civic amenities to the members of the state. However, it does not indicate whether LIP 1 was the best project for meeting the strategy. Also, there was no ‘options evaluation’ section in the project business case. This

further confirms that the feasibility study of the project may not have been done properly. This confirms that the project scoping and resources could not been proper if an improper feasibility study had been done.

In the planning stage of LIP 1, the respondents all responded “YES” when asked if the project cost and financial breakdown was properly defined based on the required resources identified within the scope of the project (P9). This was in line with the information shown in the “Budget section” of the project plan. The other 18 common PM practices received a higher “NO” responses than “YES” from the respondents, which proposes that the practices were not adhered to during the lifecycle of LIP 1 (see table 5.3a). The project plan showed that most of the PM common practices were not detailed and some key features such as risk mitigation, activity schedule and sequencing were missing amongst others. The third stage of the data collection; open discussion; further supports the evidence in the project plan. The consultant to the project said:

*“there was no time to do a proper project plan because they just called us and said...’we want you to produce a plan for this project in 48 hours because we need it for the board approval’...at such we have to do what we have to do”*

From the comment of the consultant above, there is a suggestion that there was not enough time to produce an original detailed plan for LIP 1 as this would have involved stakeholders evaluation and engagement plan, risk assessment and management plan, change plan amongst others. All of these separate plans that compose the final project plan would also need consultations and reviews by relevant agencies/stakeholders, which could not have happened in 48 hours. However, the question is then; how does only P9 get adhered to if there was so short duration to produce the project plan? It is evident from the comment of the project consultant; “they just called us”; that who ever he was referring to must have done the budget/financial side of the planning before asking for the consultant to produce the remaining parts of the plan; perhaps to make the plan look professional and appealing to the board. This is further highlighted in the

comment of the project owner organisation representative about the project funds when he was asked if the project met its original cost estimation:

*“....we had limited funds available to us to carryout so many capital projects so from the start we paid a lot of attention to the financial side of things but as you know, in projects you cannot foresee everything that will come or else you are God.....”*

From the project owner organisation’s representative comment above, it can be confirmed that the project budget planning received more attention than the rest of the planning for LIP 1. This would not have occurred if proper PG had been in place.

In the executing and monitoring stage of the LIPs, when respondents were asked if good quality assurance and control was conducted during this project stage (E3, E13) of the LIP, all five responded “YES” while at least three respondents responded “NO” to when asked about the LIP adherence to the remaining common PM practices for the executing and monitoring stage. There was no data regarding to the executing and monitoring stage of this LIP from the project plan or any of the other documents acquired during the data collection process. Hence, the third stage of the data collection served as the only source of information to crosscheck the proposition from the questionnaires. The respondents mentioned that the executing stage was very poorly monitored and controlled as most of the communication and reporting tracks laid out in the plan were never adhered to. The project contractor said;

*“.....you find out that it’s more of one man business where somebody sitting down there and as far as he is concerned he takes vital visitation every now and then that overshadows technical consideration. The guide provided by the project plan is ignored and some random measures are used to track the progress and quality of the work.... basically attention is not being paid to the technical details, instead the focus of the control and reporting is on commercial considerations”*

From the comment of the contractor, there is an indication that the controlling and monitoring of LIP 1 was more focused on cost and expenditure rather

than quality and set Key Performance Indicators (KPIs). This is in line with the comment of the project owner representative about the limited funds available to the government and how they paid a lot of attention on the “funding side of things”. Thus, this further confirms the data from the pre-interview form, which suggests that attention was paid to value for money (quality) whilst other aspects of the project executing, controlling and monitoring suffered neglect due to this extreme focus on value for money.

The closing stage of LIP 1, proposed that the two common PM practices set for this stage; contract closeout must be done at end of project, administrative closure of project must take place at the end of project; were adhered to. The five respondents responded “YES” when asked if the two closing stage PM common practices (C1, C2) were adhered to. The data from the open discussion on the LIP; stage three; supports this proposition. The project contractor representative said this when asked how the project was closed:

*“.....err...I will say everything went according to due process in the closing stage. Nobody will gain or lose anything from following the normal administrative procedure in closing out contracts, so it was done professionally.”*

However, the pauses by the respondent “err” before responding, indicates that he either doesn’t remember the activities of the closing stage or that he had limited knowledge of it. This implies that his response is unreliable if that either of the cases was the truth. Nevertheless, the other respondent having agreed to the same proposition regardless of their interviews and forms being completed separately, provides a strong indication that the proposition that all of the closing stage PM common practices were adhered to is reliable.

#### 5.4.2 LIP 2

For LIP 2, the initiating stage, the majority of the respondents responded “NO” when asked if the LIP adhered to common PM practices I1, I2 and I4 but “YES” when asked if the LIP adhered to I3. The project plan provided evidence that the LIP was well justified as it was in line with the organisations overall business strategy, which is to expand rapidly in the growing Nigeria

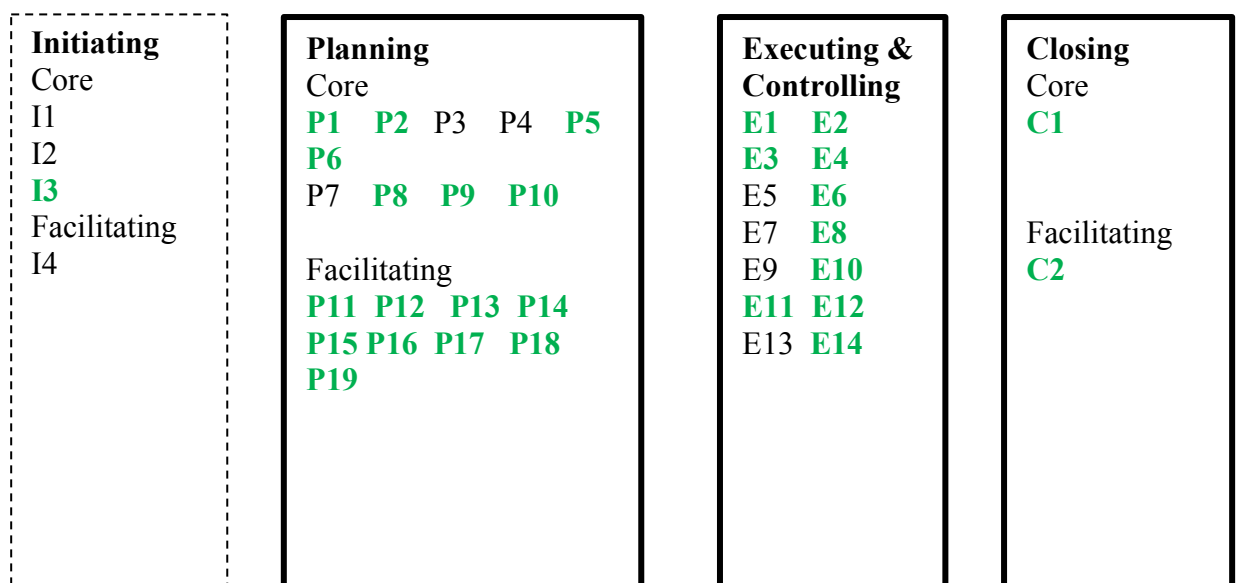
economy, especial if the services they are to provide will boost their competitiveness. This gave the LIP a high scored from the project need analysis. Furthermore the open discussion in the third stage of the data collection process also supported the proposition gathered from the questionnaire data. The respondents all suggested that the initiating stage of the LIP was rushed by the project owners due to an urgent need to provide telecom services; to remain competitive; that depended on this infrastructure project. The five respondents all agree that the project owners had given a very short deadline for the delivery of the LIP, which led to omission of various common PM practices at the initiating stage. In place of the common practices they used documentations from similar LIPs done in the recent past to develop the LIP plan, scoping, costing and resourcing. Hence, the proposition that the LIP expectations were not clear to all is understandable since things were done in a rush. Also, the use of previous documentations rather than having an actual scoping and budgeting is in line with the suggestion made the respondents that I1, I2 and 14 were all done improperly.

#### **Adherence to PM stage**

#### **Adherence to PM**

##### **common practices**

- Weak =-----
  - Medium =———
  - Strong =————
- Adhered to = **Green colour**



**Figure 5.1b: LIP 2 Adherence to PM common practice**

For example, the open discussion by LIP 2 consultant highlighted his reasons for suggesting on the pre-interview forms that I1, I2 and I4 were all improperly:

*“At the beginning, the selection of contractors and suppliers for the project was done in a rush. There was a lot of pressure from everywhere for us to provide baseline estimation for judging the contractors bids when we didn’t even have the full understanding of the project expectations. We had to go for some documents we had from similar project we did about a year ago because you know these things cannot be done under pressure or you may miss out some key factors. Although we were not certain about the geographical details of the location of this project, in the one week target given to us, we still submitted something. The project board were happy with it and we moved on”*

Also, the open discussion from the project owners’ representative further strengthens the proposition of the consultant:

*“We were clear on the need for us to embark on this project. However, due to the urgency to build the necessary infrastructure in order to provide our services on the date we have promised the public, it was impossible for us to allow the contractors and other teams to start fiddling about. We stamped our authority and made sure everybody was pushed to their very limit to bring out the best out of them given the limited time available to us in this project.”*

Similarly, the contractor, beneficiary and guarantor representatives for LIP 2 all made comments that confirms the ones made by LIP 2 owner and consultant representatives above.

The comment of the project owner representative “...We stamped our authority...” indicates that a strong planning, monitoring and controlling methods may have been put in place in LIP 2. This indication will be further explored in the discussions covering the planning and executing stages of LIP 2.

In LIP 2 planning stage, the PM common practices P1, P2, P5, P6, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18 and P19 were all selected as



being adhered to by three or more out of five of the project participants given the questionnaires to complete. The remaining three PM common practices received a “NO” response from majority of the respondents and this proposition is strongly in line with the information available in the project plan. The project plan showed detailed and precise information about the required scope; required resources cost monitoring and control measures for handling the projects. The plan also had a clear risk management and stakeholder management plan. The only aspect that was not detailed in the plan was the project activity definition P3 and project activity sequencing P4. Moreover, the project scheduling lacked “slacks” to accommodate for any slipping in planned dates P7. The project plan clearly supports the proposition made by the respondents in the questionnaire survey. The third stage of the data collection; open discussions did not provide much data about planning as the respondents mainly commented on the initiating, executing/controlling and closing stages.

The executing and controlling stage, majority of the respondents (three or more) answered “YES” to E1, E2, E3, E4, E6, E8, E10, E11 E12 and E14 while they answered “NO” to E5, E7, E9 and E13. There was no evidence from the project plan or any other documents to validate this proposition hence the data from the open discussions in stage three of the data collection process was used.

The project owners’ representative suggested that due to the need to finish LIP 2 on time, there was hardly any solicitation (E5) done even when needed, rather issues such as land dispute and contractual disagreement which was experienced during the project was dealt with through informal resolution with parties involved. When he was asked if they used any solicitation for the issues the experienced in the project he responded by saying:

*“.....There was never any chance of solicitation in this project (he laughs). We were even struggling to cope with our near to impossible schedule not to talk of solicitation. In fact, the land dispute was resolved in two days by making immediate negotiations for financial compensation regardless of whether we were right or the land owner was. This was part of the factors that stretched the budget because at this point we had almost exhausted all our contingency funds.”*

From the comment of the project owner representative, there is an indication there was good or at least quick response the project issue. This confirms good stakeholder/owner engagement, which is in accordance with the proposition that the planning stage was adequate.

Furthermore, in the comment of the project owner representative, he laughed halfway talking about solicitation; this indicates that the question about solicitation reminds him of something unusual about how solicitation was perceived in LIP 2. Thus, there is a possibility that autocratic decision-making process may have taken place in LIP 2. If that is the case, the autocratic process could have other impact on the outcomes of the project. The impact of the decision making process on the outcome of LIP 2 will be further examined in chapter six.

Besides, the project owner representative comment also suggest that the contract administration process (E7) may not have been conducted properly as the information about the land contractual agreement was not clear to the people working on site.

The comment that the contractual agreement issue was resolved in two days suggests a weak change control (E9). This is further highlighted by the response of the contractor when asked about how the managed some of the changes that was made to the scope of the project:

*“.....actually a lot of the changes in scope and budget were minor and had the approval of the project board. The board authorised project team to make any necessary changes to the scope or budget, provided it did not go over 10% of what was originally planned to avoid delays. Any major changes was sent to the board for approval and the speed at which they respond was very quick”*

Finally, the quality control (E13) also is questionable based on the above comment from the contractor. This is because the changes that were considered as minor could have a major bearing in the quality of the final product. The project consultant's representative confirms this argument as he suggests that the final quality of the project product was not as planned in some areas:

*“...as I said before, the mast and all the communication equipment were working properly at the end but a few minor areas like the surrounding fence and flooring were not to planned quality”*

In terms of the other PM common practices that were said to be adhered to, the respondents open discussions supported the proposition as they five of them agreed that most part of the executing and controlling stage went to plan. In summary, the questionnaire data was supported by the data generated from the open discussions.

The closing stage of LIP 2, suggests that the two common PM practices set for this stage; contract closeout must be done at end of project (C1) and administrative closure of project must take place at the end of project (C2); were adhered to. The five respondents responded, “YES” when asked if the two closing stage PM common practices where adhered to. The data from the open discussion on the LIP; stage three; confirmed this proposition. The project contractor representative said this when asked how the project was closed:

*“.....Oh, most definitely, the normal administrative processes took place. The infrastructure documents and keys were handed over and everything went fine”*

### 5.4.3 LIP 3

In LIP 3, none of the five respondents responded “YES” when asked if they think the common Project Management (PM) practices for the initiating stage were properly adhered to in this project. This suggests that all respondent agree that during the lifecycle of the LIP (I1), the expectations of stakeholders were not clearly defined, the project scope and resource were not estimated satisfactorily at the beginning of the project (I2), the choice of project with respect to other related projects was sufficiently justified (I3) and the feasibility study at the beginning of the project was either poorly conducted or not done at all (I4) (see figure 5.1c). The information collected in the third stage of the data collection process; open discussion about the general activities that took place during the LIP lifecycle; supports this

proposition. Both the project consultant and beneficiary representatives used the phrase “no such thing” in response to being asked what PM common practices was adhered to at the initiating stage. The beneficiary representative said:

*“It was a joke really....(clears his throat). Will you be surprised if I told you that the first stakeholders meeting was in the middle of the project implementation and no words that we said were listened to? How can you start a project without any need assessment, then mid-way through it you try to do one?”*

From the comment above it can be seen that after commencing his response, the respondent cleared his throat, paused for a short moment then restarted with a question; this indicates hesitation in saying what had originally come to his mind. Thus, there is an indication that the reality of what he is talking about could be worse than what he has presented. The later comment he made about the expectations, scope and resourcing of the project was more revealing of the degree of dissatisfaction of the beneficiaries about the way LIP 3 was initiated:

*“.....I don’t think any such thing was done. If you ask the contractor, they will even tell you that the scope of the project kept changing drastically. I even heard that there was no bidding process.....the contract was awarded without any due process. How do you expect proper feasibility or scoping to be done?”*

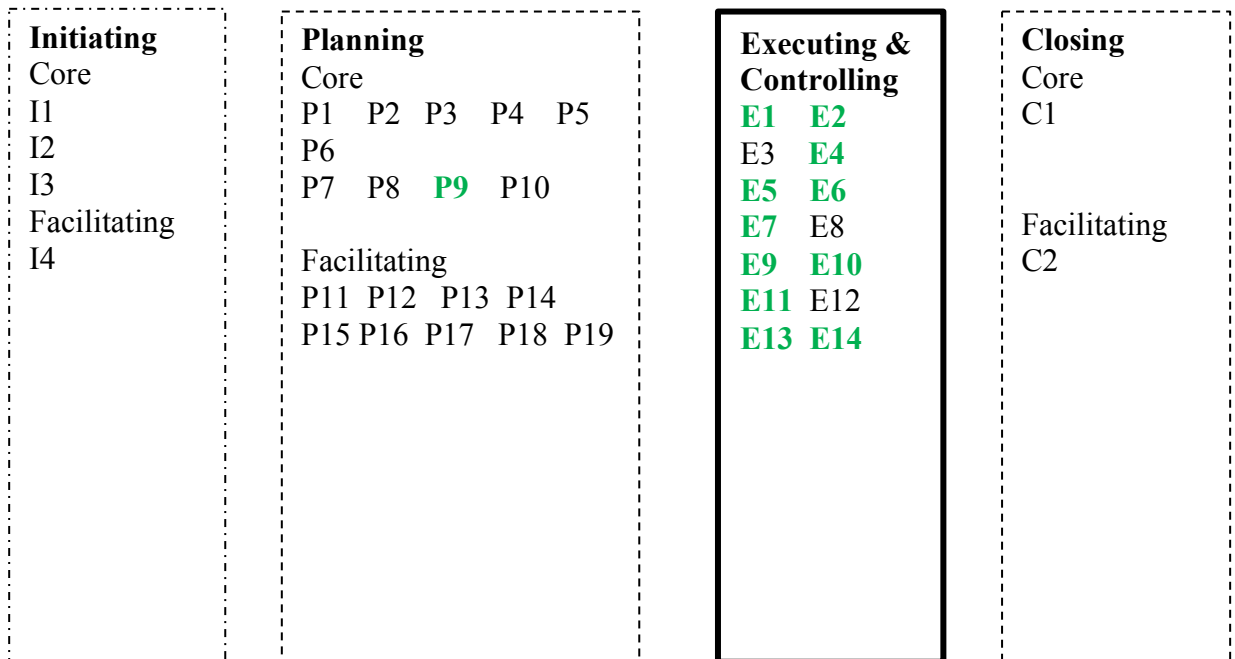
Therefore, this further indicates that LIP 3 did not adhere to common PM practices for initiating stage.

### Adherence to PM stage

### Adherence to PM

#### common practices

- Weak = - - - - -
  - Medium = ———
  - Strong = = = = =
- Adhered to = **Green colour**



**Figure 5.1c: LIP 3 Adherence to PM common practice**

In the planning stage of LIP 3, the five respondents all responded “YES” when asked if the project cost and financial breakdown was properly defined based on the required resources identified within the scope of the project (P9). This was in line with the information shown in the project plan. The other 18 PM common practices received a majority response of “NO” than “YES” from the five respondents, which proposes that the practices were not adhered to during the lifecycle of LIP 3 (see table 5.3a). This was evident in the project plan as there was no risk assessment section, no stakeholder management section, very scanty schedule, activity and resource planning. The third stage of the data collection; open discussion; provided more evidence to the proposition as the consultant suggested that:

*“.....a plan was in place but it was not much of a plan really because there was not much clarity about what several aspect of the project. The sponsors ran the project as the liked. We were just there like headless chicken”*

The executing and controlling stage, majority of the respondents (three or more) answered “YES” to E2, E4, E5, E6, E7, E9, E10, E11, E13 and E14 while they answered “NO” to E3, E8 and E12. There was no evidence from the project plan or any other documents to validate this proposition.

The responses from the questionnaires suggest that the Information flow during the project was very poor and not according to what was agreement, quality assurance was not properly conducted to plan, performance reporting was not according to plan and cost control was properly done. The project contractor representative indicated that poor communication during the project had a strong adverse effect on the project quality and cost control. This further caused a lot of delays in decisions about changes and late payments. When he was asked to give he’s overall view on the project implementation, he said:

*“.....Hmmm, the project was very frustrating due to communication and other issues. I don’t know if the government did not have enough money for this project before going into it because for example, I work after one month I submit my certificate and after 9 months I receive my money. Why? My profit has gone because I’m running expenses without anything my staff idle and I’m living here my movement everything is money my expenses will be running and the time that’s why by then 18 months duration of the project is gone.”*

From the comments of the contractor representative, it can be seen that he was expressing dissatisfaction with the payment process of LIP 3 as well as the time overrun that was experienced in this LIP 3. He mentioned that his profit was “gone” due to delays on agreed payment plan. This situation could have resulted in the contractor compromising the standard of work and

materials used in the project in order to cover for his unbudgeted extra expenses due to the delay. At the beginning of the comment he made the sound “Hmmm” suggesting an inner contradicting feelings whether to express what he really wants to complain about or not; this further suggests that he may have felt uncomfortable to express his feeling in case it gave out an insight to other things that may have happened as a result of his dissatisfaction with the poor payment process. This proposition will be further explored in the PEST analysis later on in chapter six.

The closing stage of LIP 3, suggests that the two common PM practices set for this stage; contract closeout must be done at end of project (C1) and administrative closure of project must take place at the end of project (C2); were not adhered to. The five respondents responded “NO” when asked if the two closing stage PM common practices were adhered to. The data from the open discussion on the LIP; stage three; confirmed this suggestion. The project consultant representative mentioned that the closure of the project could have been earlier but poor stakeholder engagement resulted in it dragging. At the end it was abandoned:

*“.....in my opinion, this project should have been shut down ages before it was abandoned. As soon as the traditional rulers’ council being the main beneficiary to the project rejected the idea of the conference centre. They council leadership argued that they members were being owed months of salary arrears and their communities lacked basic amenities thus, an ultra-modern conference centre was a nonstarter for them. Moreover they have one already. The past government administration ignored their cry and when the new government arrived the immediately ordered the cease of sponsorship of the project as it was useless”*

#### 5.4.4 LIP 4

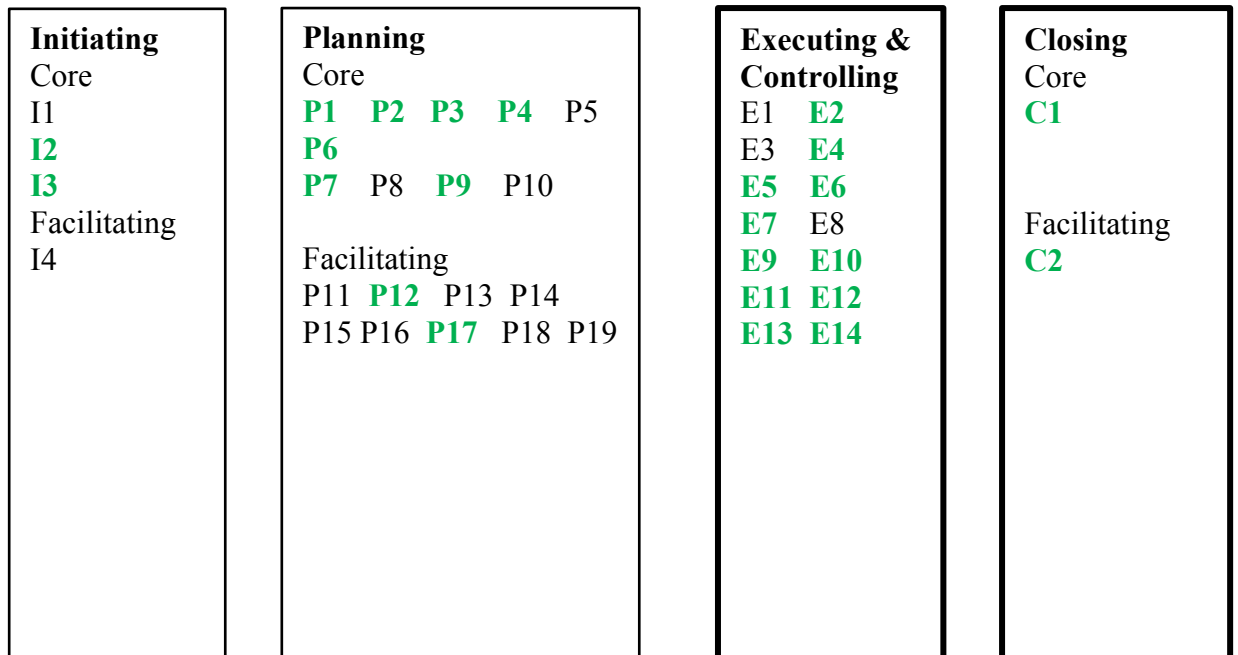
##### Adherence to PM stage

##### common practices

- Weak =-----
- Medium =———
- Strong =————

##### Adherence to PM

- Adhered to = **Green colour**



**Figure 5.1d: LIP 4 Adherence to PM common practice**

In LIP 4, none of the five respondents responded “YES” when asked if they think the common Project Management (PM) practices I1 and 14 for the initiating stage were properly adhered to in this project. This suggests that all respondent agree that during the lifecycle of the LIP (I1), the expectations of stakeholders were not clearly defined and the feasibility study at the beginning of the project was either poorly conducted or not done at all (I4) (see figure 5.1d). on the other hand, the respondents all agreed that the PM common practices; the project scope and resource were not estimated satisfactorily at the beginning of the project (I2), the choice of project with respect to other related projects was sufficiently justified (I3); was adhered to by all selecting “Yes”. The information collected in the third stage of the data collection process; open discussion about the general activities that took place during the LIP lifecycle; supports this proposition. Both the project



consultant and beneficiary representatives used the phrase “*no such thing*” in response to being asked what PM common practices was adhered to at the initiating stage.

In LIP 2 planning stage, the PM common practices P1, P2, P3, P4, P6, P9, P12 and P17 were all selected as being adhered to by three or more out of five of the project participants given the questionnaires to complete. The remaining three PM common practices received a majority of “NO” response from the respondents and this proposition is strongly in line with the information available in the project plan. The project plan clearly supports the proposition made by the respondents in the questionnaire survey. The third stage of the data collection; open discussions did not provide much data about planning as the respondents mainly commented on the initiating, executing/controlling and closing stages.

The executing and controlling stage, majority of the respondents (three or more) answered “YES” to E2, E4, E5, E6, E7, E9, E10, E11, E13 and E14 while they answered “NO” to E1, E3 and E8. There was no evidence from the project plan or any other source to validate this.

The closing stage of LIP 4, suggests that the two common PM practices set for this stage; contract closeout must be done at end of project (C1) and administrative closure of project must take place at the end of project (C2); were adhered to. The five respondents responded, “YES” when asked if the two closing stage PM common practices were adhered to. The data from the open discussion on the LIP; stage three; confirmed this proposition. The project consultant representative suggested that:

*“.....we had a smooth transition from contractor to owner at end of the project with all due processes followed. There was no qualms in the closing stage”*

#### 5.4.5 LIP 5

For LIP 5, the initiating stage, all of the respondents responded “Yes” when asked if the LIP adhered to common PM practices I1, I2, I3 and I4. The project plan provided evidence that the LIP was well justified as it was in line with the organisations overall business strategy, which is to expand construct wider and excellent road networks in the countries capital. This gave the LIP a high scored from the project need analysis. Furthermore the open discussion in the third stage of the data collection process also supported the proposition gathered from the questionnaire data. The respondents all suggested that the initiating stage of LIP 5 was thoroughly done by the project owners and contractor. The five respondents all when asked at the third stage of the data collection, agreed that the project owners had given enough time for feasibility study as the contractor and consultant insisted on that.

In LIP 2 planning stage, the PM common practices P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18 and P19 were all selected as being adhered to by three or more out of five of the project participants given the questionnaires to complete and this proposition is strongly in line with the information available in the project plan. The project plan showed detailed and precise information about the required scope; required resources cost monitoring and control measures for handling the projects. The plan also had a clear risk management and stakeholder management plan. The project plan clearly supports the proposition made by the respondents in the questionnaire survey. The third stage of the data collection; open discussions did not provide much data about planning as the respondents mainly commented on the initiating, executing/controlling and closing stages.

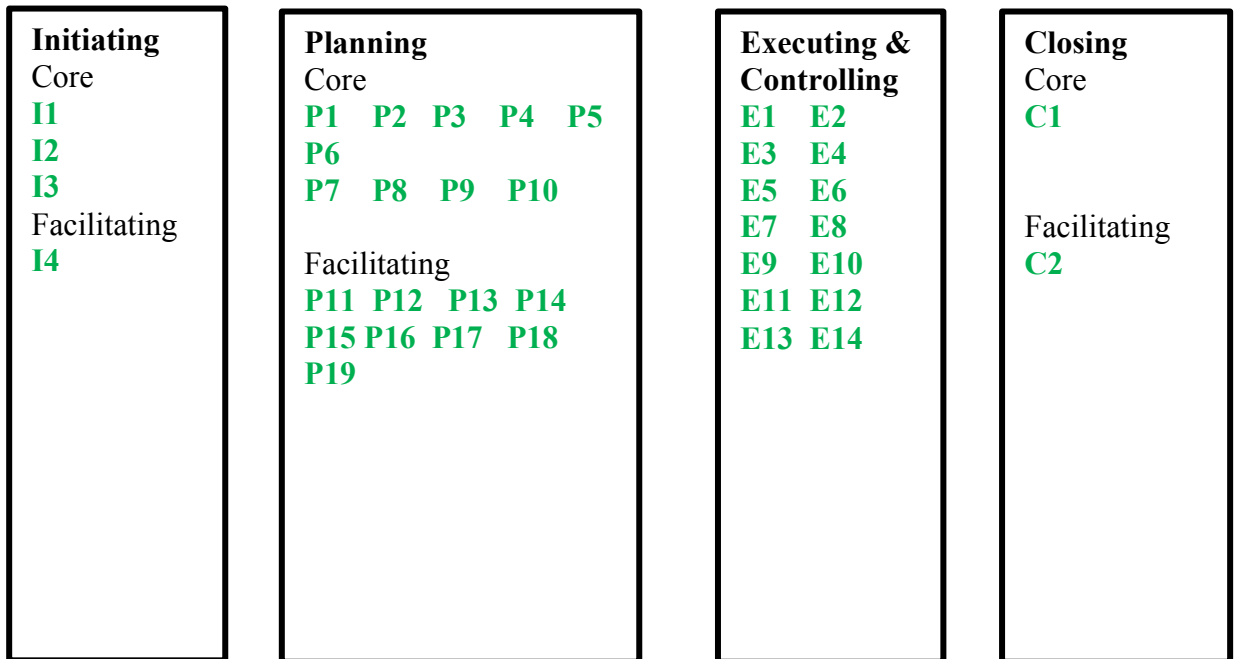
## Adherence to PM stage

### common practices

- Weak =-----
- Medium =———
- Strong =————

## Adherence to PM

- Adhered to = **Green colour**



**Figure 5.1e: LIP 5 Adherence to PM common practice**

The executing and controlling stage, majority of the respondents (three or more) answered “YES” to E1, E2, E3, E4, E5 E6, E7, E8, E9, E10, E11 E12, E13 and E14.

The closing stage of LIP 5, suggests that the two common PM practices set for this stage; contract closeout must be done at end of project (C1) and administrative closure of project must take place at the end of project (C2); were adhered to. The five respondents responded, “YES” when asked if the two closing stage PM common practices were adhered to. The data from the open discussion on the LIP; stage three; confirmed this proposition. The project contractor representative said this when asked how the project was closed:

*“.....a project closure meeting was held in which several talking points were discussed. The lesson learnt log was completed and documented in our online share drive. Other administrative and contractual processes were also brought to a close and project was officially handed over during the commissioning event”*

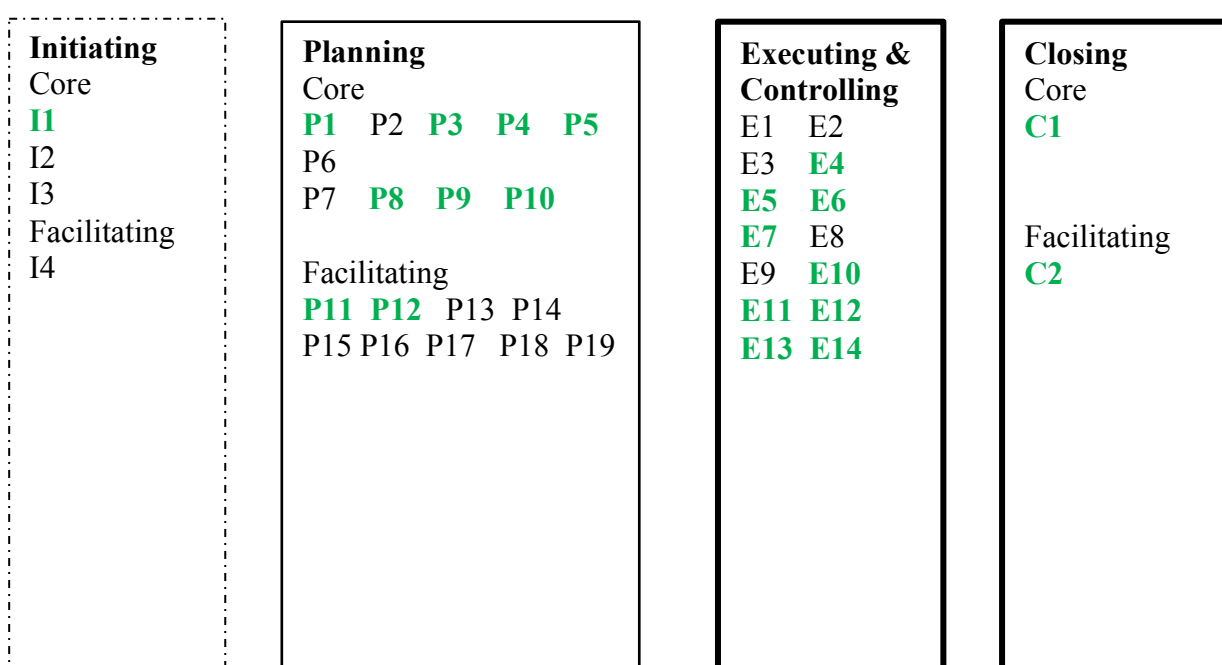
#### 5.4.6 LIP 6

##### Adherence to PM stage common practices

- Weak =-----
- Medium =———
- Strong =————

##### Adherence to PM

- Adhered to = **Green colour**



**Figure 5.1f: LIP 6 Adherence to PM common practice**

In LIP 6, none of the five respondents responded “YES” when asked if they think the common Project Management (PM) practices I1, I2, I3 and I4 for the initiating stage were properly adhered to in this project. This suggests that all respondent agree that during the lifecycle of the LIP (I1), the expectations of stakeholders were not clearly defined and the feasibility study at the beginning of the project; the project scope and resource were not estimated satisfactorily at the beginning of the project (I2), the choice of project with respect to other related projects was sufficiently justified (I3); was either poorly conducted or not done at all (I4) (see figure 5.1f). The

information collected in the third stage of the data collection process; open discussion about the general activities that took place during the LIP lifecycle; supports this proposition. The project consultant representative said when asked to give open discussion about the initiating stage:

*“.....I will take it this way the major problem we having in developing country projects is that most times our projects come adhoc it can be ok say the project will be approved next month and they start asking everybody can we have input, can we have input, so by the time you know it there is no background work done on these projects and the problem of no access to data no coordination all of them begin to play out on the long run and that interferes with the overall performance of the project we find out that hardly do you have time to do a detailed estimation for project proposal because they want it now now now you find out that there was so much wrong regulations and estimations. The estimation and information in this project was haphazard.”*

From the comment of the consultant, there is an indication that he was not satisfied with the level of work his organisation and him put into the estimation and consultation in LIP 6. He tried to attribute this to common practice of hurried approach to project planning and initiation. Besides in the other LIPs the respondents also mentioned this hurried, which suggests that this might be a culture or common practice problem in the country. To understand the impact of social-cultural factors on the outcome of the studied LIPs, the PEST analysis will explore this later in chapter six.

In LIP 6 planning stage, the PM common practices P1, P3, P4, P5, P8, P9, P10, P11 and P12 were all selected as being adhered to by three or more out of five of the project participants given the questionnaires to complete. The remaining PM common practices received a majority of “NO” response from the respondents and this proposition is strongly in line with the information available in the project plan. The project plan clearly supports the proposition made by the respondents in the questionnaire survey. The third stage of the data collection; open discussions did not provide much data

about planning as the respondents mainly commented on the initiating, executing/controlling and closing stages.

The executing and controlling stage, majority of the respondents (three or more) answered “YES” to E1, E2, E3, E4, E6, E8, E10, E11 E12 and E14 while they answered “NO” to E1, E2, E3 E8 and E9. There was no evidence from the project plan or any other documents to validate this proposition.

The closing stage of LIP 2, suggests that the two common PM practices set for this stage; contract close-out must be done at end of project (C1) and administrative closure of project must take place at the end of project (C2); were adhered to. The five respondents responded, “YES” when asked if the two closing stage PM common practices where adhered to. The data from the open discussion on the LIP; stage three; confirmed this proposition. The project owner representative was asked how the project was closed and this was his response:

*“.....all due processes were observed. You can be sure to get into trouble if one process was missed. The federal government are very serious with such things lately.”*

## 5.5 Identifying the PG structure, people and information of the LIPs

This section will examine the structure, people and information involved in the governance of the six LIPs studied in this research. The first subsection will identify if there were project governance groups; steering, board, stakeholders group; involved in the six LIPs and discuss how these groups operated. Subsection 5.4.2 will identify the people involved in the governance of the LIPs in terms of their competence, selection process and the roles the played. The third subsection will identify the information provided for the PG group at the beginning as well as during the LIP life cycle. Also, the disclosure of information/decision made by the PG group to the project teams will be examined. The list of PGPs has been categorized into structure, people and information groups. See below:

1. The board/steering committee has overall responsibility for governance of project management.
2. The roles, responsibilities and performance criteria for the governance of project management are clearly defined.
3. Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.
8. The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.
12. Projects are closed when they are no longer justified as part of the organisation's portfolio

**Table 5.4a: Structure related PGPs (APM Booklet 2011)**

6. Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.
11. Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.

**Table 5.4b: People related PGPs (APM Booklet 2011)**

4. A coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio.
5. All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.
7. The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.
9. There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.
10. The organisation fosters a culture of improvement and of frank internal disclosure of project information.

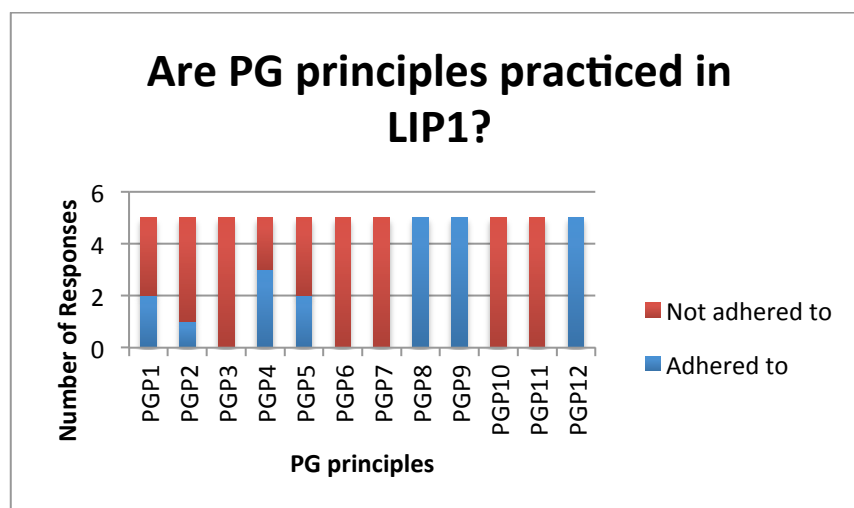
**Table 5.4c:** Information related PGPs (APM Booklet 2011)

The PG principles (PGP) 1, 2, 3, 8 and 12 are related to the governance structure while PGP 6 and 11 are related to the governance board membership or people. Finally, PGP 4, 5, 7, 9 and 10 are related to the disclosure of information to and from the governance board. The data from the second stage of the data collection process; semi-structured interviews focused on identifying the PG principles adhered to in the LIPs; will be used to examine the PGP adherence levels in the LIPs. For PG structure, if an LIP adheres to two or less of any of the PGP, then it will be considered as having a weak adherence. If it adheres to three it has medium adherence and if it adheres to four or over PGPs, then it is considered to have a strong adherence.

#### 5.5.1 LIP 1

LIP 1 had a weak adherence to PG structure related principles as only PGP 8 and 12 were adhered to, out of the five PGP (1, 2, 3, 8 & 12) relating to governance structure.





**Figure 5.2a: LIP 1 Adherence to PGPs**

All five respondents suggested that PGP 8 was well practiced in the project when asked:

Did the steering committee have or delegate to anybody the authority to decide when independent scrutiny of project and the management system should be done? If yes, did they use it in this project?

The Project owner organisation representative responded:

*“....there was no committee as such. The order of reporting was; the site engineer to the project manager, the manager to myself on a monthly basis or as when necessary, then me to the commissioner and commissioner to the governor, who takes final decisions and has all the authority.”*

The comment indicates the style of leadership that was used in the project; this again points towards a possible dictatorial culture as earlier shown in the hurried approach project initiation and planning. The PEST analysis later in this chapter will explore the impact of culture on the outcomes of the LIPs.

When asked if the Governor permitted any independent scrutiny of the project or the management system, he responded;

*“No.....maybe at the beginning when the consultant was asked to scrutinize the project plan and all the other setups but after that, it was us that scrutinize and the governor decide. We have very qualified and experienced personnel in place so there is really no need for any external bodies.”*

Again this comment shows a lack of culture of continuous learning.

Then he was asked if the project experienced any delays or other issues with regards meeting its original specifications, he replied;

*“No project can be perfect. We do our best and I think the issue of delay in this project was largely due to lack of fund due to the number of projects the state has to do within its limited budget. So in general I think the project was ok”*

The comments about the absence of a formal project steering committee (PGP 1) and the governor being the final authority depicts a weak PG structure in itself but the comment about the consultant being brought in at the early stage when the thought it was needed shows an adherence to PGP 8. This is arguably right due to the fact that the focus of the principle is more on the willingness of the authority to allow independent scrutiny when necessary rather than the presence of a formal steering committee. This is highlighted in the principle where it says;

*“ the steering committee have or delegate to anybody the authority to decide when independent scrutiny.....”*

The roles and responsibilities of people (PGP 2) involved in the ‘informal’ governing of LIP 1 seem not to be clear no have been set out as the respondent from the project owner organisation also pointed out that;

*“.....Everyone knew their responsibility. So there was no need to put it on pen and paper. We have worked together in other works so it was not difficult for us to know our roles and responsibility”*

It is not clear how a disciplined governance process (PGP 3) could have existed when none was clearly identified and agreed on in the project. Therefore, it would be fair to say there was no disciplined governance arrangement in place in LIP 1.

Furthermore, the comment about project staff knowing their roles by default suggests that a lot of assumptions would have taken place and some staff may have neglected some task as so on. This indicates a poor clarity in roles and responsibility as well as poor disclosure of information during the lifecycle of LIP 1.

When the project owners' representative was asked;

Do you still believe this project is justified as part of your organisations portfolio and objective? If no, when were this identified and what actions were taken? (PGP 12)

He responded by saying:

*“...very very justified indeed. It may have not been delivered on budget and planned duration but it is a project that impacts on the life of the people and that is what this administration set out in her six point agenda during the election”*

The project beneficiary organisation representative agrees with this in his response as well as the consultant. The beneficiary response to the same question was;

*“ .....I'm not sure that any other project would have been more important than this one. The life of the people almost depended on it”*

The comments of the three respondents indicate that LIP 1 was justified thus; PGP 12 was adhered to as project was not abandoned even when funding became insufficient. PGP 12 proposes that projects be closed as soon as they were identified as no longer justified, otherwise be continued.

In terms of PGPs relating to people that must be in the steering committee with respect to their competence and importance (6 and 11), LIP 1 was again weak in adhering to the common PGP. The five respondents all suggested that there was no steering committee set up for the project and that the people involved in the project were based on “normal” organisation’s structure rather than with respect to their competence or importance in the project. LIP 1 beneficiaries mentioned their lack of involvement in the project as a major concern for them. Also there was no stakeholder management column in the project plan, which suggests that the stakeholders were not managed nor engaged adequately. The beneficiary organisation representative mentioned:

*“ .....Our suggestions in the project was very little. We were simple sent a memo at the middle of the project to say...there is a project so and so going on. I don’t know of any committees but if there was one, we were not part of it”*

There is an indication from the comment of the beneficiary and owner, that solely the state’s governor largely governed LIP 1 as no stakeholder management was recorded. The respondents in general suggest the absence of any steering committee in effect no stakeholder involvement in the decision making and governing process.

The PG information disclosure related principles, were also shown to be weakly adhered to by LIP 1. The only PG relating to information that was adhered to was **PGP 4**; a coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio. The remaining PGPs; 5, 7, 9 and 10 relating to the disclosure of information were not adhered to. This leaves the adherence level to one out of five which is considered as weak.

The five respondents all agreed that the relationship between the organisations portfolio and LIP 1 was strong.

On the other hand, for PGP 9; there should be clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels

required by the organisation; the absence of a steering committee, clear agreed reporting structure in the project plan suggests that the project reporting structure was unclear. The reporting line seemed clear to some of the respondent but the details of what must be reported was missing. The evidence that supports this proposition is seen in the response of the project owner representative;

*“The order of reporting was; the site engineer to the project manager, the manager to myself on a monthly basis or as when necessary, then me to the commissioner and commissioner to the governor, who takes final decisions and has all the authority.”*

When he was asked, if the information that needs to be reported was clearly stated he responded;

*“....they already know what they need to report. Our staffs are good and have worked in many other projects”*

The project contractor representative in the project progress/issue also mentioned of the unclear reporting criteria:

*“That one is not problem because.....between my company and the government, only me is contacting them. I report to site engineer who now escalates issue or report status to the project manager and the manager feeds the permanent secretary who give the report to commissioner to discuss with the oga.....what we report varies. It is depending on what is happening at the time so there are no fixed criteria or details that is a must”*

The contractor’s understanding of the reporting structure is exactly the same as the project owners, which, suggests that there is consistency in the reporting issues.

Also, **PGP 5**; all projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions

made at authorisation points are recorded and communicated; has not been strongly adhered to in LIP 1 as the project plan did not show any fixed or agreed authorisation points. The project consultant and contractor both supported what was in the plan when they responded to the question;

Was there a plan for the project? If yes, were there any review and authorisation points and how well did this run during this project? Was review decisions recorded and communicated properly?

Consultant:

*“The authorisation points was the payment point where the contractor had to win a certificate for the job he has done so far. Though this was not clearly stated in the document, but it is an accustomed practice in the government contracts in the state.....if the contractor fails to win the certificate, he has to go and correct the job and return for approval.....when he wins the certificate that’s the time he can go to the finance department for the payment for that phase”*

When asked if there is any communication protocol for the reporting of decisions on the certificate winning process, he replied:

*“As I said, it is not necessary or else a monthly or status report is due to be given to the Governor otherwise the contractor has to go away and do his job before returning for payment”*

Contractor

*“What happens is that we did the work up to a certain point .....for example, if the total payment is N10 million, there can be 4 payment points and each point has a certain level of job that is required to be completed. So when we complete to standard we ask them to come and approve. The certificate we earn is what we use to get the payment from the finance people”*

When asked if these payment points have agreed dates to them, he replied;

*“hahahaha.....how can you talk about dates when the first payment took 9 months for us to receive it? You see, if the pay on time then dates can be good ”*

The laughter suggests that agreed dates were never followed and was more of a formality than a guide to the activities of the project. Thus, indicating that loose authorisation points.

When asked how the work done was measured to ‘win the certificate’, he said;

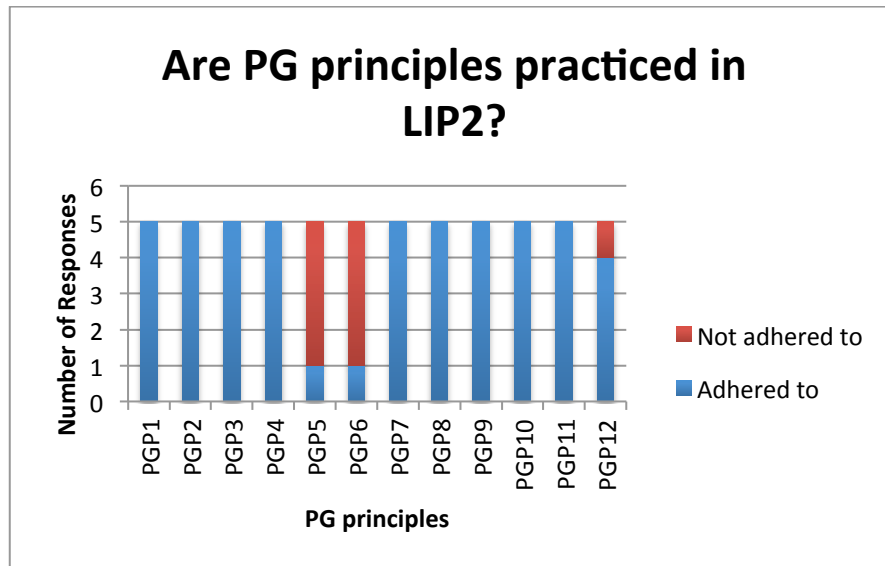
*“....the engineer will know the amount of work that should be done at the given stage of the project”*

From the responses of the contractor and consultant, it is indicative that there was not agreed review point and even if there was one that existed outside of the project plan, it was not strictly adhered to and was subject to the perception of the “engineer” rather than clearly agreed points. Therefore it is fair to depict that PGP 5 was not adhered to in LIP 1.

Similarly, for **PGP 7**; the project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions and **PGP 10**; the organisation fosters a culture of improvement and of frank internal disclosure of project information, the responses given by the contractor and consultant suggested that the principle were not adhered to.

### **5.5.2 LIP 2**

LIP 2 had a strong adherence to PG structure related principles as all of the five PGP relating to governance structure were adhered to. Four out of the five respondents suggested that the five PGP were adhered to when asked the relevant questions.



**Figure 5.2b: LIP 2 Adherence to PGPs**

For example, when asked;

The board/steering committee has overall responsibility for governance of project management?

The LIP 2 contractor organisation representative responded:

*“.....of course, they had the responsibility of approving, reviewing and directing the progress of the project. It was not like they come to the site and tell us what we do but they project manager works based on their decisions and authorisation.”*

Then he was asked if he can state an example of what makes him believe that the steering committee had overall responsibility for governing the project he replied;

*“Errrrr.....Ok let’s say about the project gates. This project had gates.....that is, the authorisation points where certain set of critical tasks and milestones should have been completed before project can move to next stage. At the gates I produce a report which the project manager takes to the committee people for them to review it against the planned task; so actual versus planned. Then, they will say if we are allowed to go to the next stage or not. If there are some issues raised, for instance, when we had agitation from youth in the local community, they analysed our proposed mitigations and made a decision..... for us to use our recommended mitigation as well as for an outside body to come and support us”*



The comments from the contractor suggests that the steering committee were provided with information as planned and had authority over the management of the project. The project consultant and beneficiary who were in the steering committee also propose the same as the contractor did.

When the project consultant; who was part of the steering committee; was asked the same question, he responded;

*“Definitely, we were tasked with the responsibility of delivering the project successfully by ensuring that the project team, contractor and suppliers do their job on time and according to what was agreed in the plan of the project.”*

Taking into account the responses of the contractor and consultant, it is fair to say that PGPs that relate to adequate governance structure are all adhere to. PGP 1; about overall responsibility; is seen in the process of getting LIP 2 passed from one stage to another. PGP 2, about the clarity of roles and responsibility; the consultant made it clear what the committees role was to his understanding, which was in line with what the contractor organisation representative; who was not in the steering committee suggested this shows a good understanding of their role by all participants in the project. PGP 3; about discipline governance; though there was not much direct indication about the level of governance discipline in LIP 2 from the responses of the respondents, it is fair to say PGP 3 was adhered due to the fact that the planned governance structure (from the project plan obtained during the survey) was in line with what the respondents said. For PGP 8; about authority to bring in independent agency for scrutiny of the process; the comment by the contractor;

*“.....they analyse our proposed mitigations and make a decision.....maybe for us to use our recommended mitigation or for an outside body to come and look at it before they can decide”*

Clearly indicates that PGP 8 was adhered to in the project. What we cannot tell is whether it was all through the project or occasionally but considering that the project guarantor gave a separate example of why he believes that

the steering committee had authority to bring independent scrutiny suggests PGP 8 was strongly adhered to. The Project guarantor replied when asked about PGP 8;

*“I think they do, the fact that they brought us in even after we had completed our task to run a final check on the quality of work and materials used in the project before the final project payment was made says it all. You can make your own deductions from there”*

PGP 12, about closure of project when unjustified; it is clear that the project was not closed as it was completed and commissioned according to the respondents, hence the question is; did it need to be closed before its actual closure? Comments by the project contractor indicates that the steering committee had regular information provided to them at the stage “gates”, therefore, if they had the need to close it, it is fair to assume that they would have. So their authority to close the project if the needed to, was not in doubt.

With regards to the project governance people; competence and importance, LIP had a medium adherence to the related principles as only one out of the two related principles was adhered to. The project owner’s reply to the question about PGP 6 was;

*“As you may know, this is a government project and we are in a third world country, so ‘who knows who’ plays a part here.....hahaha. Some members of the committee were hand-picked not for their competence or relevance but possibly because of their brother is in power. I will not go into details with that but you are Nigerian my brother so you should know what I mean. But this did not affect anything because we had enough competence in us to do the directing of the project so.....yes everything was ok”*

The response from the project owner suggests that PGP 6 was not adhered to. However, for PGP 11; about stakeholder engagement; the project owner indicated that the level of engagement was adequate and this contributed to why the “hand-picked” members of the committee did not have much impact

in the role of the steering committee. He replied to question about PGP 11 by saying;

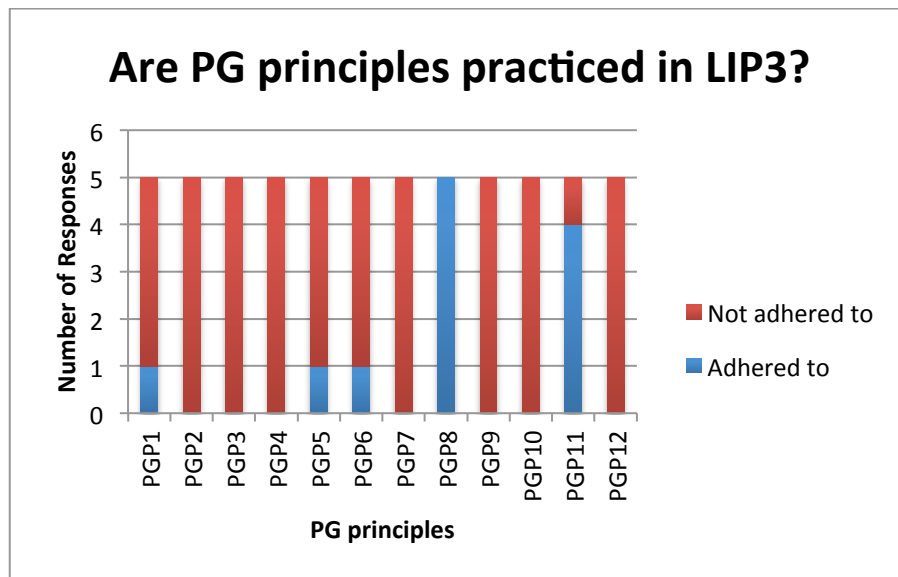
*“Yeah.....not every stakeholder got the same level of engagement. Some were sent memos; others were not even in the committee but were continually contacted for their opinions. People like us in the committee were involved in the decision making and approving of the project at various gates”*

From the response of LIP 2 project owner, it can be seen that PGP 11 was adhered to.

Finally for PGPs relating to the total and free disclosure of information to the steering committee and in the organisation, the respondents suggested a strong adherence. The contractors comment about reporting project status, the sync in the views of the consultants and contractor regarding role of the steering committee and the owner’s awareness of the level of information disclosed to different stakeholder groups suggest that people adhered to sufficient and free flow of information. Hence all the information related PGPs (4, 5, 7, 9, 10).

### **5.5.3 LIP 3**

For LIP 3, the structure and information disclosure related PGPs were weakly adhered to. Whilst the people related PGPs had a medium adherence level. Only PGP 8 out of five related PGPs was adhered to in relations to governance structure, PGP 11 in relations to governance people out of two and zero out of five PGPs relating to governance information disclosure.



**Figure 5.2c: LIP 3 Adherence to PGPs**

The steering committee’s authority to appoint an independent body for scrutiny of the project management was agreed to by all five respondents and was also indicated in the project plan. The project guarantor’s response to the question about PGP 8 best indicates the authority of the steering committee in fulfilling this principle;

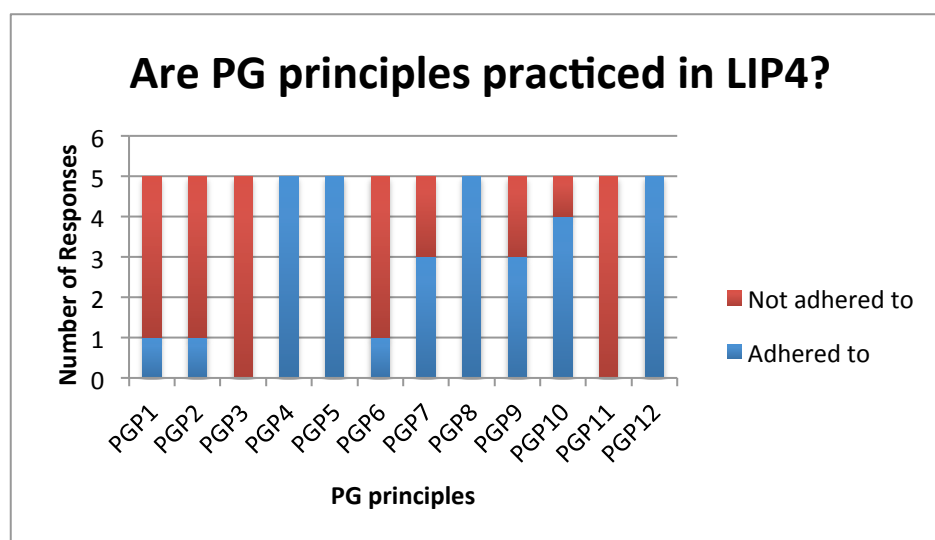
*“....the only aspect I know the committee had strong hold on was deciding when a consultant can come and investigate or scrutinize as you will call it. But the outcome of the scrutiny did not really mean anything the people running the show.”*

The same comment above suggests that the steering committee did not have overall responsibility and discipline governance was not adhered to. When the project consultant was asked to give an overview of the project during the open discussion stage of the data collection, he clearly suggests that though the right people may have been engaged at commensurate level (PGP 11) of the project, there was lack of disciplined governance, poor information management, and poor governance structure in general and poor access to information. Thus, disclosure of information in the organisation and in this project in particular was weak.

The project plan showed that the business case was not supported by realistic and relevant information about how the project was linked with the organisations strategy. Four out of the five respondents also confirmed this.

#### 5.5.4 LIP 4

LIP 4 had a medium adherence to governance structure and people related PGPs but had a strong adherence to the information disclosure related PGPs. PGP 8 and 12 were adhered to in structure related principles, no PGP relating to people was adhered to and all five PGPs; 4, 5, 7, 9 and 10 relating to information were adhered to.



**Figure 5.2d: LIP 4 Adherences to PGPs**

The project owner, contractor, beneficiary and consultant gave a similar response to questions asked about PGP 6 and 11. The response by the project contractor best presents the views of the respondents on the competence and relevance of people that were in the project committee;

*“.....the steering committee hardly replied to information we feed to them for approval. They were as good as not existing. I can say the only job they did was approving consultants to go and re-examine what was going on whenever a change was suggested. Also maybe when the approved that the project was complete and set for commissioning. Every other task sent to them stayed for months and all of a sudden you here from the resident engineer that director from the ministry has authorised a totally different thing from what we requested.”*

Who asked if this had anything to do with poor information disclosure he said;

*“Not at all....we followed the reporting structure set in the plan and everyone in the project had access to information when required because we had a resource planning tool provided for the project. I think the committee simply lacked the knowledge to deal with the high level decisions left to them and also were not really allowed full control because the director of works was like the most powerful man in this project. He is connected in high places so you can't touch him. I believe he even selected the steering committee members”*

The project owner who was in the steering committee confirmed the suggestions by the contractor. The project owner suggested that the members of the committee did not have overall control over the project because of the nature of the project. He claimed that the sponsoring body had the responsibility to ensure the project goals are met. He also said that their role was scrutinized rather than approve which was different from what was proposed by the project beneficiary who was also in the steering committee. The beneficiary suggested that the steering committee had the task of monitoring and reporting to the director of works. The beneficiary responded saying;

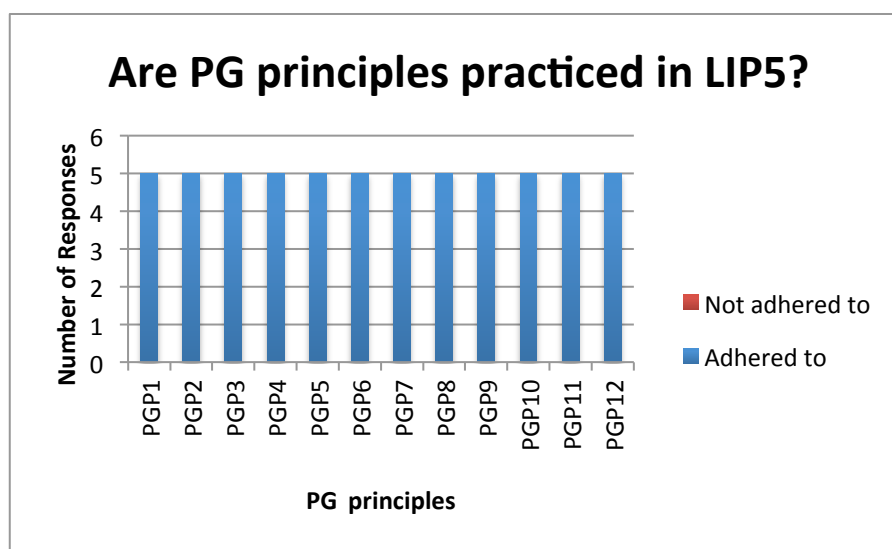
*“.....we were not really there to call the shots. Our role was more of monitoring body and we were supposed to report to the commission of what we see”*

From the comments of the contractor and project owner, it can be deduced that there was a lack of structure and clear definition of roles of the steering committee. Thus PGP 1, 2 and 3 were not adhered to.

#### 5.4.5 LIP 5

LIP 5 had a strong adherence to PG structure related principles as all of the five PGP relating to governance structure were adhered to. All five

respondents suggested that the five PGP were adhered to when asked the relevant questions.



**Figure 5.2e: LIP 5 Adherence to PGPs**

For example, when asked;

Did the steering committee have or delegate to anybody the authority to decide when independent scrutiny of project and the management system should be done? If yes, did they use it in this project?

The LIP 2 contractor organisation representative responded:

*“A team of independent subject matter experts were identified and assembled for the project as soon as the project was initiated. Their role was to scrutinize and review the management and engineering practices during the project at agreed points”*

When the project consultant was asked the same question, he responded;

*“Certainly, this project followed the procurement due process and the outline for project delivery set by the Bureau for public enterprise; which says that a team of independent experts must be selected for review and scrutiny of every large capital federal government project.”*

The project owner organisation representative said the project was very well governed using all standards set for governance of large capital projects in federal government projects. His response when asked if the about PGP 1 and 2 was;

*“The project board (steering committee) were selected based on the list of stakeholders identified for this project. Then the stakeholders are categorized into primary, secondary, tertiary and key. The different categories are represented in the project board and contacted through a memo endorsed by the director or works. They are assembled in a project introduction meeting where they are told of the project objectives etc.....all the details.....the KPI thing you mentioned as well and etc etc. From then on, we took full responsibility for ensuring the project is managed properly and delivered as planned.”*

The comments give an indication that the steering committee had the overall responsibility for governance of project management. Also, it suggests that the steering committee members are clear on their roles and responsibility; this was confirmed by the response of the project beneficiary representative who was also in the steering committee (or project board as they call it). In response to questions relating to PGP 1 and 2, he said;

*“.....All of us were happy. What made us to be happy was that we were respected and contacted with very detailed information about the progress of the project. Everything was reported as of time agreed.....no come today come tomorrow. We were clearly told what we need to do and our contribution was taken.....you reach a decision and you see it happen life!! Truly it made us happy.....and also the contractors were world-class. Everyone in the board enjoyed working with them.”*



When asked what he enjoyed about working with the contractor, he replied?

*“Hmmm.....everything! The way things were organised, the detail they provide when reporting.....other contractors that we worked with in the past don’t provide enough detail so some time we reach decision but they bring the same issue back because something was missed last time”*

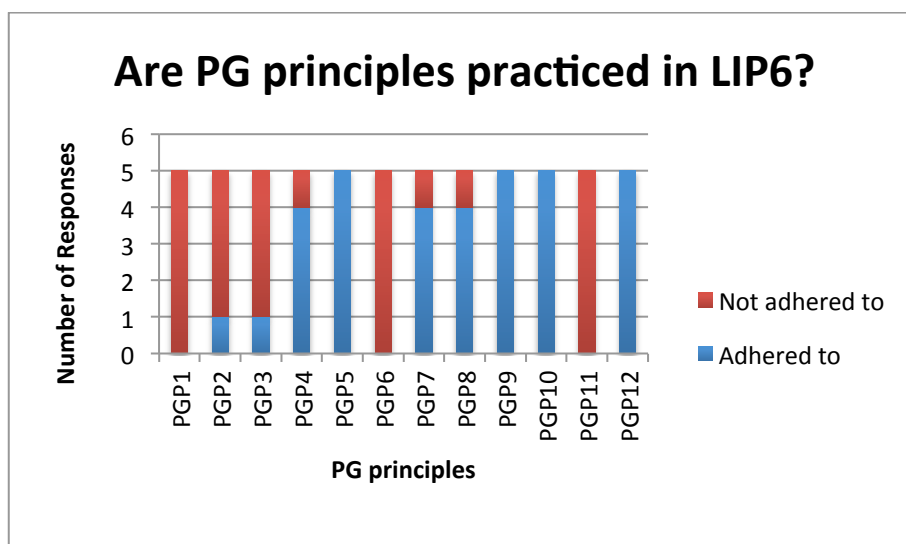
The response from the beneficiary suggests that the steering committee a strong structure as all relating PGPs to structure were adhered to. Furthermore, the previous response by the project owner representative suggests that the right people were appointed into the steering committee as a thorough stakeholder identification process (PGP 6). With respect to PGP 11, the response by the project owner representative suggest that all stakeholders where engaged at the appropriate level depending on their importance to the project. This was shown in the comment about the stakeholders’ identification process. Furthermore, the project consultant commented on the reporting structure of the project. He said;

*“It was a stringent process. The key stakeholders were given updates monthly on the KPIs and deliverables, the primary stakeholders were contacted more regularly about the project issues and risks via telephone calls and email, the secondary stakeholders given updates as at when needed to there their view on progress of the project and the tertiary stakeholders’ were asked for updates on tasks and also kept updated as at when necessary”*

The reporting structure shows disciplined governance process and suggests that the information disclosure during the project was good. This indicates that the information related PGPs are also strongly adhered to.

#### 5.5.6 LIP 6

LIP 6 had a medium adherence to PG structure related principles as only two out of the five PGP relating to governance structure were adhered to.



**Figure 5.2f: LIP 6 Adherence to PGPs**

All four respondents out of five suggested that the PGP 8 and 12 were adhered to, and all five agree that PGP 1, 2 and 3 were not adhered to. For example, when asked questions about PGP 8, the project owner organisation representative, replied;

*“.....when it comes to scrutiny, we had a case where the contractor wanted to change the electrical equipment originally specified for the project as the manufacturers no longer produce that product. The cost implication and suitability of the new recommended equipment had to be scrutinized. So we brought in independent experts to look into it. This caused a lot of delays because of the government processes. Files were not moved to the right departments on time to authorize the scrutiny and so on”*

Then he was asked if it was not the steering committee that decided on that. He replied;

*“No way.....our position is a very difficult one because the way the project is structured in this country, especially this one which was sponsored by the federal government, so you find out that as a client you don't have a sweeping plan over the contractor. So you can't really turn the screw very hard. For instance, by the time we say what we want to the client he is like a virtual client because you are not the one calling the shots (paying them). The one controlling the contracts are the consultants, in fact a more appropriate nomenclature would have been that the steering committee are rubber stamp because we are in a position where we don't have absolute control over the project. So you can only suggest and that was the problem. I think one of the issues that you see in the third world countries is the structuring of our contract agreements.”*

The project owner organisation representative in this case emphasises the fact that PGP 8 was adhered to by suggesting that steering committee did appoint an independent body to scrutinize project, though it was not them that made the final decision on the subject. Furthermore, the comment about the steering committee not having overall responsibility and being 'rubber stamps' suggests that PGP 1; overall responsibility, PGP 2; clear roles and responsibility, and PGP 3; discipline governance were all not adhered to.

When the project contractor representative; who was in the steering committee was asked the same question, he confirmed what was said by the project owner organisation representative about none adherence to good governance principles relating to structure of project governing body by saying;

*“Definitely there is so much political influence in fact one of the problems we have in third world countries is that political interest over whelms technical viability of projects. Certain things we could have done otherwise we have other areas we could have applied the funds and get better results but we must play along with political consideration and those political interests are behind the scene they are not seen in the front but we also know they are there they are the underlying current that are propelling the whole thing.”*

The PGPs (6 and 11) relating to competence and importance of steering committee membership were weakly adhered to in LIP 6. The project beneficiary representative suggested that they were not kept informed about the project nor represented in the steering committee. The project guarantor representative who was in the steering committee supported this. The guarantor mentioned that there was a poor representation of stakeholders in the steering committee and that most of the members were appointed based on reasons other than competence and importance to the project. When he was asked if PGP 6 and 11 were adhered to, he responded saying;

*“I think the people with the know how were excluded from the steering of the project. The committee lacked substance and authority because of the quality of people in it. Maybe the selected people they can manipulate easily for reasons best known to them”*

The comments of the guarantor suggests that the people related PGPs where not adhered to in LIP 6.

The governance principles relating total and free disclosure of information amongst organisation staff as well as project steering committee were however strongly adhered to. All five respondents that were interviewed suggested this. The all agreed that the reporting of project status, issues and risk was strong as a clear plan was in place and everyone followed it very well. For example, the project owner confirmed this when he said;

*“The rules were clear for reporting and everyone followed it exactly like scripture. However, the technical crew did their job but the political interest that came in from the onset of the project selection and the agreement, did not the information passed to be used effectively. So what we do as technical people is to tag along to what the government want to do which is like working from the answer to the question, so this is what they want maybe the president is from the village and want an electric transformer for his people then this will be added to the scope of the project and that is how we go about it.”*

The project plan also confirms that a clear reporting plan was specified as well as a detail project justification. Thus, PGP 4, PGP 5, PGP 7, PGP 9 and PGP 10 were all adhere to in LIP 6.

## **5.6 PEST Analysis**

This section will identify the impact of adherence to PGPs on the adverse influence of external (political, economic, socio-cultural and technological) factors. Subsection 5.6.1 will identify the impact of adherence to PGPs on the political influences; government style and interest, policies, political stability, political loyalty; seen in each of the LIPs using the data collected. Subsection 5.6.2 will identify the impact of adherence to PGPs on controlling the influence of the economic factors such as inflation, exchange rate, economic growth, interest rates, availability of materials and unemployment. The next subsection will identify the impact of adherence to PGPs on the social influences such as demographics, living conditions, education, social mobility and culture. The fourth subsection will identify the impact of adherence to PGPs on controlling the influence of IT resources, cutting edge technology, civic infrastructure and inventions/ development of technology on the LIPs.

To measure the degree of adverse influence caused by each factor; political, economic, social and technological; the following metrics will be used:

**Major** = factor was significantly noticed in LIP and contributed to a variance in the original estimations

**Medium** = factor was significant noticed in LIP but did not contributed to a variance in the original estimations

**Minor** = factor was not significant in LIP and did not contributed to a variance in the original estimations

### 5.6.1 Assessing the direct impact of POLITICAL factors on LIPs

By political factors, this section refers to government regulations, political interference on decision making process and political environment/culture of Nigeria. These factors can influence the LIPs and create adverse impact on their performances. For example;

**Government policy:** Federal government sponsored infrastructure projects are bound within the government “due process” policy set for projects and procurement process while a private or state government sponsored project is not. The due process policy is governance related policy set by the federal government to ensure LIPs are properly delivered with good accountability, transparency and responsibility. The absence/presence of good governance policy for the LIPs will be examined in association with this factor.

**Political interference on decision-making process (Domination and subordination):** LIP 1 showed indications of political interest and influence on the project. The respondents suggested that there was no formal governance structure in place. This was suggested to be due to the project sponsor being the state government. It is difficult to separate the project from the influence of the sponsors especially when there is no regulation in place to ensure that. Thus, the presence of political influence; though suggested to have contributed to the poor management and subsequently poor performance of LIP in terms of meeting original estimations; should not have had direct impact on the project, If there was a policy in place to protect the project from external influence; such as project governance policies.

The people managing the project also suggest the decision process in LIP 1 to have suffered from lack of clarity of role as well as lack of authority to make decision. The decisions came from a single source. The lack of authority to make decisions may have impacted on the commitment level and responsibility. This consequently will have an impact on the accountability level from the project team. This means that the PG and PM practices may easily be overlooked because the team is not subject to accountability as they had little or no contribution to the decisions made. This issue is directly linked to lack of good governance practice. Therefore, the influence of PG adherence on reducing the adverse impact of this factor will be examined.

**Political environment:** Looking back on the 15 years of democratic governance in Nigeria, the number of political, tribal and religious related crisis and division in the country seems to have increased than during the military governance period (Obasanjo, 2004). The lack of a stable political environment has created a need for leaders to seek temporary and quick solutions; especially infrastructural due to poor infrastructural development in the country; to the electorate wellbeing in order to get re-elected (Obasanjo, 2004). This approach to governance has led to poor strategic planning and rushed initiating and planning of projects. Thus, the presence of a PG policy in the project could have arguably provided a barrier between this political instability and the management of LIPs.

These factors could have an impact in the performance of the project or the adherence of the projects to PG and PM practices. In order to separate the identified relationships between adhering to PG principles and conditions external to the projects, it is essential to identify all political influences on each of the projects, to what degree these influences adversely affected the LIPs and the actual impacted they had on the projects.

LIP	Category of political influence experienced	Degree of adverse influence	Impact on LIP performance
LIP1	Government policies	Major	No PG policy adopted and type of PM methodology
	Political interference on decision process	Major	Poor reporting structure and poor management and governance practices
	Political environment/culture	Major	Rushed planning, poor delivered project
LIP2	Political interference on decision process	Minor	Rushed initiation of project – optimism bias and strategic misinterpretation – leading to minor scope variation
	Government policies	Minor	Very minor delays due to approval of variations
	Political environment/culture	Minor	Rushed initiation of project – optimism bias and strategic misinterpretation – leading to minor scope variation
LIP3	Political interference on decision process	Major	Weak business case and justification Poor stakeholder and risk management Poor governance
	Government policies	Major	Delays in variation approval process
	Political environment/culture	Major	Rushed planning and poor performance
LIP4	Political interference on decision process	Major	Rushed initiation of project – optimism bias and strategic misinterpretation
	Government policies	Minor	Delays due to approval of variations
	Political environment/culture	Minor	Medium executing and controlling
LIP5	Political environment/culture	Minor	High need to finish within estimated duration, hence, some cost implications
	Political interference on decision process	Minor	No identified impact on project
	Government policies	Minor	Delay in approving variations but this had no impact on agreed timelines
LIP6	Government policies	Major	Unclear governance structure
	Political interference on decision process	Medium	Poor stakeholder management and consequently delays
	Political environment/culture	Major	Rushed executing and controlling, hence variance in scope and cost

**Table 5.5a: Analysis of adverse impact of political influences on LIPs**

## 5.6.2 Assessing of impact of ECONOMIC factors on LIPs

### Civil infrastructure

Many authors have described the state of Nigeria civil infrastructure in Nigeria as “non-existent”.



Obasanjo (2004) suggests that:

*“The unvarnished truth is that Nigeria has no infrastructure, the sparse ones we have are in advanced stages of decay. At this point, Nigeria’s infrastructure is held together by rusted iron, crumbling concrete and of course our national pastime – prayers. Our roads are a disgrace and the few bridges and overpasses look like they could collapse at any moment. Our power grid is ancient, the Kainji dam and its outdated turbines look like relics from an old civilization while thermal stations like Egbin are in a precarious state. We have no sewage treatment system; gallons of untreated sewage overflows into the streets from open sewers and canals making Nigeria one of the dirtiest nations on earth.”*

Thus, it is vital to examine the impact of the alleged poor civil infrastructure on the lifecycle of the LIP and how adherence to PG principles relates to this factor.

### **Availability of materials, equipment and resources**

Nigeria economy is considered as one of the fastest growing economies in Africa (Okpara, 2011). However, there are several sectors of the economy such as manufacturing are still lagging behind in terms of development due to lack of basic civil infrastructure (Obasanjo 2004). This under development in the manufacturing sector has led to unavailability of key steel products used in LIPs as well as unavailability of engineering equipment.

It is imperative to understand how the LIPs were managed in the presence of such economic situation and identify the role of adherence to PG principles in reducing the adverse impact of this factor on the LIPs.

**Inflation, supply chain and currency exchange rate:** The inflation and currency exchange rate of any economy has the power to influence the international supply chain in the economy (Issato et al, 2011). In a country like Nigeria; and most developing economies; where manufacturing is not well established and there is a strong dependency on importation for delivering LIPs, it is difficult to separate the impact of the supply chain on the

performance of the LIPs in meeting original estimations. Therefore it is important to examine how the adherence to PG principles contributes to reducing the adverse impact of the supply chain system on the LIP.

LIP	Category of economic influence experienced	Degree of adverse influence	Impact on LIP performance
LIP1	Civil infrastructure	Medium	Delays due to electricity outage and additional cost for private electric generator
	Availability of materials, equipment and resources	Major	Scope creeping, delays in procurement and consequently cost implications
	Inflation, supply chain and exchange rate	Major	Scope creeping, delays in procurement and consequently cost implications
LIP2	Civil infrastructure	Minor	No impact
	Inflation, supply chain and exchange rate	Medium	Variations in cost
	Availability of materials, equipment and resources	Minor	Minor scope creeping and cost variation
LIP3	Civil infrastructure	Medium	Delays due to electricity outage and additional cost for private electric generator
	Availability of materials, equipment and resources	Major	Scope creeping, delays in procurement and consequently cost implications
	Inflation, supply chain and exchange rate	Major	Large cost overruns due to fluctuation in exchange rate and inflation
LIP4	Civil infrastructure	Medium	
	Availability of materials, equipment and resources	Medium	Scope creeping, delays in procurement and consequently cost implications
	Inflation, supply chain and exchange rate	Medium	
LIP5	Civil infrastructure	Minor	No identified impact as contractor had independent infrastructure system
	Availability of materials, equipment and resources	Minor	No identified impact as contractor had independent manufacturing company
	Inflation, supply chain and exchange rate	Minor	No identified impact as contractor had independent supply chain system
LIP6	Civil infrastructure	Medium	
	Availability of materials, equipment and resources,	Major	Scope creeping, delays in procurement and consequently cost implications
	Inflation, supply chain and exchange rate	Major	

**Table 5.5b: Analysis of adverse impact of economic influences on LIPs**

### 5.6.3 Assessing of impact of SOCIAL factors on LIPs

Social factors such as; poor living standards, 'family dependency' or Individuality according to Hofstede cultural dimensions, autocracy culture, and poor education/skill level or low Long Term Orientation; has been perceived as major issues in the Nigerian society (Knapp et al, 2011). Eight military dictators ruled Nigeria from 1966 to 1999; each putting very hard dictatorial rules in place during their regime. The rule of law and order was totally eliminated during this period and most of the current workforce of the country have grown to know nothing but the "rule by force" culture (Knapp et al, 2011). These years under dictatorship also left the economy in a very poor state by the end of military rule (Obasanjo, 2004). Other social factors that suffer from the military rule include; peoples living standard and education/skill quality (Obasanjo, 2004). The culture of "family dependency", became stronger and people adapted to dictatorship as some worth a way of working in the corporate and social society; this is supported by Obasanjo (2004) when it writes;

*"Military rule killed the spirit of one great Nigeria which, was striving after the independence. People learnt to provide for themselves and their family, the benefits that the different levels of government should have provided.....the country got more and more segregated to the level where no one believed in the Nigeria nationhood anymore. Anger, autocracy and greed became a norm in the society"*

Therefore, it is relevant to examine the impact of these social issues on the LIP performance and identify how its impacts relate to adherence to PG principles.

LIP	Category of social influence experienced	Degree of adverse influence	Impact on LIP performance
LIP1	Living standards, and 'family dependency' /autocracy culture	Major	Poor information disclosure, poor stakeholder management and consequently delays
	Education/skill level	Major	Inadequate decision making
LIP2	Living standards, and 'family dependency' /autocracy culture	Medium	Poor stakeholder management
	Education/skill level	Minor	No identified impact
LIP3	Living standards, and 'family dependency' /autocracy culture	Major	Poor stakeholder management, poor planning, weak steering group structure and consequently unjustifiable decisions from the inception of the project.
	Education/skill level	Major	Inadequate decision making
LIP4	Living standards, and 'family dependency' /autocracy culture	Major	Poor stakeholder engagement
	Education/skill level	Minor	No identified impact
LIP5	Living standards, and 'family dependency' /autocracy culture	Minor	No identified impact
	Education/skill level	Minor	No identified impact
LIP6	Living standards, and 'family dependency' /autocracy culture	Major	Poor stakeholder management
	Education/skill level	Minor	Implementation was sometimes not to specification but was identified and controlled

**Table 5.5c: Analysis of adverse impact of social influences on LIPs**

#### 5.6.4 Assessing of impact of TECHNOLOGY factors on LIPs

The use of information technology (IT) and other management resources/tools in facilitating the process in LIP has becoming common in the developed economies (Ekpenkhio, 2003). On the contrary, IT and management resources are not commonly used in LIPs managed in developing economies (Ekpenkhio, 2003). However, it is essential to examine the level of IT resources/tools used in the LIPs first and secondly evaluate the impact of IT and other communication technologies on the LIPs before identifying how they relate to adherence of each LIP to PG principles.

LIP	Category of technology influence experienced	Degree of adverse influence	Impact on LIP performance
LIP1	Unavailability/non-utilisation of PM resources and tools	Medium	Tools and resources were lacking and the planning of activities was poor and also poorly communicated
	Communications technology	Major	There was poor communication technology and consequently project information disclosure was poor
LIP2	Unavailability/non-utilisation of PM resources and tools	Minor	Available and was used; no identified impact
	Communications technology	Minor	Available and was used; no identified impact
LIP3	Unavailability/non-utilisation of PM resources and tools	Major	Available but not used and LIP was poorly monitored/controlled
	Communications technology	Medium	Available but not used and LIP information disclosure was poor
LIP4	Unavailability/non-utilisation of PM resources and tools	Minor	Available and was used; no identified impact
	Communications technology	Minor	Available and was used; no identified impact
LIP5	Unavailability/non-utilisation of PM resources and tools	Minor	Available and was used; no identified impact
	Communications technology	Minor	Available and was used; no identified impact
LIP6	Unavailability/non-utilisation of PM resources and tools	Minor	Available and was used; no identified impact
	Communications technology	Minor	Available and was used; no identified impact

**Table 5.5d: Analysis of adverse impact of technological influences on LIPs**

## 5.7 Summary

In this chapter, the data generated from the data collection exercise was presented. The overview of data collected; stages and processes used to collect the data as well as the demographical composition of the data collected was presented. The performance of the LIPs in meeting their original estimations, the adherence levels to PGPs and the adherence to PM common practices was examined and presented respectively and finally, a summary to all the discussions in this chapter was presented. The evaluation and interpretation of the relationships that exist in the data presented in this chapter will be done in chapter six to enable us answer the research questions.



**CHAPTER 6.0**  
EVALUATING THE RELATIONSHIPS BETWEEN  
ADHERENCE TO PROJECT GOVERNANCE PRINCIPLES  
AND PROJECT OUTCOMES

## **6.1 Introduction**

In this chapter, theory triangulation analysis will be used to examine if adherence to PGPs have impact on the outcome of LIPs using the data presented in chapter five. Subsection 6.2.1 will present the analysis of the relationships between adherence to PGPs and LIPs performances in terms of meeting their original estimations. Subsection 6.2.2 will present the relationship between adherence to PGPs and adherence to PM common practices. Section 6.3 will present the impact of adherence to PGPs on the adverse political, economic, social and technological circumstances of the LIPs. Finally, section 6.4 will analyse the outcome of the theory triangulation and summarize all the discussions presented in this chapter.

## **6.2 Analysis of the relationships between adherence to PGPs and LIPs performances in terms of meeting their original estimations/ adherence to PM common practices**

This section aims to examine the influence of adherence to PG principles on both the performance of LIPs and the adherence of the LIPs to common PM practices. Matrices will be used to study the link between the performance levels of each of the LIPs and adherence to PGPs or any other two constraints (adherence to PM common practices, adherence to PGPs, performance of LIPs and impact of PEST) being studied. The following relationship categories were used to measure the relationship between adherence to PGPs and any of the three research constraints; PM common practices, LIP performance in meeting original estimations and Impact of PEST on LIPs:



## Categories of indication for matrix squares

**Strong** = when two attributes (PG adherence vs PM adherence or LIP performance or PEST impact) show same level of performance; e.g. strong/strong, weak/weak, strong/excellent, weak/poor, medium/satisfactory or medium/medium combination.

**Medium** = when two attributes (PG adherence, PM adherence or LIP performance) show fairly similar level of performance; e.g. strong/medium, strong/satisfactory, weak/satisfactory, weak/medium, medium/excellent, medium/strong, medium/poor or medium/weak combination.

**Weak** = when two attributes (PG adherence, PM adherence or LIP performance) show very dissimilar level of performance; e.g. strong/weak, strong/poor, weak/excellent or weak/strong combination.

These categories of indication will be used to label the different squares in the matrix respectively. For example, a square where weak adherence to PGP meets weak adherence to PM common practices will be labelled as STRONG. These squares will be referred to as indication squares. There will be nine indication squares in the each matrix.

## Nature of the indication shown by map

**Positive** = A positive relationship implies that an increase in the level of adherence in one will lead to an increase in adherence/performance in the other. This is indicated when four or more of the LIPs fall into a strong or/and medium indication square.

**Non-positive** = A non-positive relationship implies that an increase in the level of adherence in one will not lead to an increase in adherence/performance in the other. This is indicated when four or more of the LIPs fall into a weak indication square.

**Uncertain** = an uncertain relationship implies that that there is not enough predominance by one of the categories (strong/medium or weak). Hence this can arise when there is equal number of LIPs in strong/medium as in weak.

### Strength of the indication shown by map

To indicate the dominant strength of the relationship between two constraints being studied, the category (strong, medium or weak) of indication squares in the matrix with the highest number of LIPs falling in it will be the dominant indicator of the strength of the indication. This indication square category will be considered as the major category hence the indicator of the dominant level of strength of the relationship between the two compared constraints (PG adherence vs PEST impact, PM adherence or LIP performance). Therefore the strength can be **Strong, Medium or Weak**. However, in the case where the number of LIP that fall into the indication squares are equal, then the strength of the indication will be considered as **Uncertain**

#### Example;

	Relationship			
Adherence to PG Structure principles	<b>Strong</b>	Weak	Medium	Strong LIP 5
	<b>Medium</b>	Medium LIP 6	Strong LIP 4	Medium
	<b>Weak</b>	Strong LIP 1 & 3	Medium	Weak LIP 2
		<b>Poor</b>	<b>Satisfactory</b>	<b>Excellent</b>
	Performance in meeting original estimations/specifications			

The matrix above shows that LIP 1, 3, 4 and 5 all falling into the **strong** indications squares. Also, four or more LIPs fall into strong/medium categories, which mean the relationship is positive.

Thus, this implies that there is a **strong** indication that the relationship between adherence to PGPs and performance of LIPs in meeting original estimations is **positive**.

### 6.2.1 Relationship between adherences to PG principles and LIP performance in meeting original estimations/specifications

The analysis of the relationships between adherence to PG principles and LIP performance will be studied under three headers:

- The structure related PG principles versus LIP performance;
- The people related PG principles versus LIP performance and
- The information related PG principles versus LIP performance.

**Note:** LIP 3 will not be considered for the analysis in this subsection as the project was abandoned before its completion date. There was a large variance in the responses of the respondents about the final cost, duration and final scope of the project before it was abandoned; thus, making it inconclusive to evaluate its performance in terms of final cost, duration and scope of the LIP. However, an average of the values provided by the respondents' for the final cost, duration and scope has been documented just for record sake.

#### Structure related

	Relationship			
Adherence to PG Structure principles	<b>Strong</b>	Weak	Medium	Strong LIP 5, 2
	<b>Medium</b>	Medium	Strong LIP 4, 6	Medium
	<b>Weak</b>	Strong LIP 1	Medium	Weak
		<b>Poor</b>	<b>Satisfactory</b>	<b>Excellent</b>
	Performance in meeting original estimations/specifications			

**Matrix 6.1a:** adherence to PG Structure principles versus performance in meeting original estimations/specifications

## Results

LIP 1 had a poor performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 46.3%, a time overrun/variance of 110% and 20% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to structure, LIP 1 showed a weak adherence as only one out of the five related PG principles was adhered to.

LIP 2 had an excellent performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 20%, a time overrun/variance of 0% and 9% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to structure, LIP 2 showed a strong adherence as all of the five related PG principles were adhered to.

LIP 3 was abandoned but before then had a poor performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 200%, a time overrun/variance of 100% and 70% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to structure, LIP 3 showed a weak adherence as only one of the two related PG principles were adhered to.

LIP 4 had a satisfactory performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 27.8%, a time overrun/variance of 30% and 13% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to structure, LIP 4 showed a medium adherence as two out of the five related PG principles were adhered to.

LIP 5 had an excellent performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 4%, a time overrun/variance of 0% and 0% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence

to PG principles relating to structure, LIP 5 showed a strong adherence as all of the five related PG principles were adhered to.

LIP 6 had a satisfactory performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 66.7%, a time overrun/variance of 10% and 13% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to structure, LIP 6 showed a medium adherence as two out of the five related PG principles were adhered to.

### **Discussions**

The matrix 6.1a linking adherences to PG Structure related principles and performance in meeting original estimations/specifications shows a strong indication that there is a positively relationship between them. The indication square category with the highest number of LIPs (majority of the LIPs; five out of the five LIPs) is the strong indication square category. This implies that there is a positive and strong indication that there is a relationship.

In the review of relevant literatures, Williams et al (2009) suggested that the relationship between the adherence to project governance framework and the performance of LIPs in meeting their original specifications/estimations is positive but not strong. However, Bekker et al, (2008) suggested that strong adherence to the principles is more relevant to the performance of projects than the strict adherence to the laid out framework. Hence strong adherence to structure related PGPs should produce a strong performance in meeting LIPs original estimations/specification; this indicates a positive relationship between performance of projects and the level of adherence to PGP.

Thus, from the result of this analysis, it can be said that LIPs implemented in Nigeria show a strong indication that the performance of LIPs is positively associated to the level of adherence to structure related PGPs, which is in accordance with what is suggested in previous literatures.

## People related

	Relationship			
Adherence to PG People principles	<b>Strong</b>	Weak	Medium	Strong LIP 5
	<b>Medium</b>	Medium	Strong	Medium LIP 2
	<b>Weak</b>	Strong LIP 1	Medium LIP 4, 6	Weak
		<b>Poor</b>	<b>Satisfactory</b>	<b>Excellent</b>
	Performance in meeting original estimations/specifications			

**Matrix 6.1b:** adherence to PG People principles versus performance in meeting original estimations/specifications

## Results

LIP 1 had a poor performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 46.3%, a time overrun/variance of 110% and 20% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to people, LIP 1 showed a weak adherence as zero out of the two related PG principles was adhered to.

LIP 2 had an excellent performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 20%, a time overrun/variance of 0% and 9% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to people, LIP 2 showed a medium adherence one out of the two related PG principles were adhered to.

LIP 3 was abandoned but before then had a poor performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 200%, a time overrun/variance of 100% and 70% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to people,

LIP 3 showed a medium adherence as only one of the two related PG principles were adhered to.

LIP 4 had a satisfactory performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 27.8%, a time overrun/variance of 30% and 13% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to people, LIP 4 showed a medium adherence as zero out of the two related PG principles were adhered to.

LIP 5 had an excellent performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 4%, a time overrun/variance of 0% and 0% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to people, LIP 5 showed a strong adherence as both of the two related PG principles were adhered to.

LIP 6 had a satisfactory performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 66.7%, a time overrun/variance of 10% and 13% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to people, LIP 6 showed a weak adherence as zero out of the two related PG principles were adhered to.

## **Discussions**

The matrix 6.1b linking adherences to PG People related principles and performance in meeting original estimations/specifications shows a medium indication that there is a positively relationship between them. The indication square category with the highest number of LIPs (majority of the LIPs; three out of the five LIPs) is the medium indication square category. This implies that there is a positive and medium indication that there is a relationship.

In the review of relevant literatures, Williams et al (2009) suggested that the relationship between the adherence to project governance framework and the performance of LIPs in meeting their original specifications/estimations is positive but not strong. However, Bekker et al, (2008) suggested that strong

adherence to the principles is more relevant to the performance of projects than the strict adherence to the laid out framework. Hence strong adherence to people related PGPs should produce a strong performance in meeting LIPs original estimations/specification; this indicates a positive relationship between performance of projects and the level of adherence to PGP.

Thus, from the result of this analysis, it can be said that LIPs implemented in Nigeria show a medium indication that the performance of LIPs is positively associated to the level of adherence to people related PGPs, which is not strongly in accordance with what is suggested in previous literatures but is in close association.

#### Information related

	Relationship			
Adherence to PG Information principles	<b>Strong</b>	Weak	Medium LIP 4, 6	Strong LIP 5, 2
	<b>Medium</b>	Medium	Strong	Medium
	<b>Weak</b>	Strong LIP 1	Medium	Weak
		<b>Poor</b>	<b>Satisfactory</b>	<b>Excellent</b>
	Performance in meeting original estimations/specifications			

**Matrix 6.1c:** adherence to PG Information principles versus performance in meeting original estimations/specifications

#### Results

LIP 1 had a poor performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 46.3%, a time overrun/variance of 110% and 20% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to information, LIP 1 showed a weak adherence as one out of the five related PG principles was adhered to.

LIP 2 had an excellent performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 20%,



a time overrun/variance of 0% and 9% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to information, LIP 2 showed a strong adherence four out of the five related PG principles were adhered to.

LIP 3 was abandoned but before then had a poor performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 200%, a time overrun/variance of 100% and 70% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to information, LIP 3 showed a weak adherence as only one of the five related PG principles were adhered to.

LIP 4 had a satisfactory performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 27.8%, a time overrun/variance of 30% and 13% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to information, LIP 4 showed a strong adherence as five out of the five related PG principles were adhered to.

LIP 5 had an excellent performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 4%, a time overrun/variance of 0% and 0% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to information, LIP 5 showed a strong adherence as five out of the five related PG principles were adhered to.

LIP 6 had a satisfactory performance in meeting the original set estimations and specifications for the scope. There was a cost overrun/variance of 66.7%, a time overrun/variance of 10% and 13% variance/additions in specifications from the originally estimated and agreed scope of the LIP. In terms of adherence to PG principles relating to information, LIP 6 showed a strong adherence as four out of the five related PG principles were adhered to.

## Discussions

The matrix 6.1c linking adherences to PG information related principles and performance in meeting original estimations/specifications shows a strong indication that there is a positively relationship between them. The indication square category with the highest number of LIPs (majority of the LIPs; three out of the five LIPs) is the strong indication square category. This implies that there is a positive and strong indication that there is a relationship.

In the review of relevant literatures, APM (2011) suggests that;

*“Project governance aims to tackle overruns by allocating responsibilities to specific roles in the project governance process it will be easier to track the person or people that have contributed to the poor performance of a LIP; thus they can be held accountable.”*

Thus, adherence to PGPs whether structure, people or information related are expected to have positive relationship with the meeting of project original estimations and specifications.

Also, Bekker et al, (2008) suggested that strong adherence to the principles is more relevant to the performance of projects than the strict adherence to the laid out framework. Hence strong adherence to structure related PGPs should produce a strong performance in meeting LIPs original estimations/specification; this indicates a positive relationship between performance of projects and the level of adherence to PGP. Thus, from the result of this analysis, it can be said that LIPs implemented in Nigeria show a strong indication that the performance of LIPs is positively associated to the level of adherence to information related PGPs, which is in accordance with what is suggested in previous literatures.

### 6.2.2 Relationship between adherences to PG principles and adherence to PM stages common practices

#### Adherence to PG structure principles versus adherence to PM Initiating stage common practices

	Relationship			
Adherence to PG Structure principles	<b>Strong</b>	Weak LIP 2	Medium	Strong LIP 5
	<b>Medium</b>	Medium LIP 6	Strong LIP 4	Medium
	<b>Weak</b>	Strong LIP 1, 3	Medium	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Initiating stage common practices			

**Matrix 6.2a:** adherence to PG structure principles versus adherence to PM Initiating stage common practices

#### Results

The adherence to PG principles relating to structure, in LIP 1 showed a weak adherence as only one out of the five related PG principles was adhered to. The adherence to PM initiating stage common practices was weak as LIP 1 adhered none of the four practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 2 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as one out of the four practices for this stage were adhered to by LIP 2.

In terms of adherence to PG principles relating to structure, LIP 3 showed a weak adherence as only one of the two related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as LIP 3 adhered none out of the four practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 4 showed a medium adherence as two out of the five related PG principles were adhered

to. The adherence to PM initiating stage common practices was medium as LIP 4 adhered two out of the four practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 5 showed a strong adherence as all of the five related PG principles were adhered to. On the other hand, the adherence to PM initiating stage common practices was strong as LIP 5 adhered to all of the four practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 6 showed a medium adherence as two out of the five related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as one out of the four practices for this stage were adhered to by LIP 6.

## **Discussions**

Levitt et al (1980) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.2a, the indication square category with the highest number of LIPs (majority of the LIPs; four out of the six LIPs) is the strong indication square. This implies that in LIPs implemented in Nigeria, there is a strong indication that adherence to PG structure related principles is positively associated with the adherence to PM common practices for initiating stage.

Hence, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to structure and adherence to initiating stage PM common practices in Nigeria is in accordance with what is proposed by previous literature.

### Adherence to PG structure principles versus adherence to PM Planning stage common practices

	Relationship			
Adherence to PG Structure principles	<b>Strong</b>	Weak	Medium	Strong LIP 2, 5
	<b>Medium</b>	Medium	Strong LIP 4	Medium LIP 6
	<b>Weak</b>	Strong LIP 1, 3	Medium	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Planning stage common practices			

**Matrix 6.2b:** adherence to PG structure principles versus adherence to PM Planning stage common practices

### Results

The adherence to PG principles relating to structure, in LIP 1 showed a weak adherence as only one out of the five related PG principles was adhered to. The adherence to PM planning stage common practices was weak as LIP 1 adhered to only one of the nineteen practices for this stage.

In terms of adherence to PG principles relating to structure, LIP 2 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM planning stage common practices was strong as LIP 2 adhered sixteen out of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 3 showed a weak adherence as only one of the two related PG principles were adhered to. The adherence to PM planning stage common practices was weak as only one out of the nineteen practices for this stage were adhered to by LIP 3.

In terms of adherence to PG principles relating to structure, LIP 4 showed a medium adherence as two out of the five related PG principles were adhered

to. The adherence to PM planning stage common practices was medium as LIP 4 adhered nine out of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 5 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM planning stage common practices was strong as LIP 5 adhered all of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 6 showed a medium adherence as two out of the five related PG principles were adhered to. The adherence to PM planning stage common practices was medium as LIP 6 adhered nine out of the nineteen practices for this stage to.

## **Discussions**

Following the proposition of Levitt et al (1980) and APM (2011); strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, strong adherence to the PM common practices should be associated with strong adherence to PGP; which implies that a positive relationship exist between adherence to all PM common practices and adherence to all PGPs.

From matrix 6.2b, the indication square category with the highest number of LIPs (majority of the LIPs; five out of the six LIPs) is the strong indication square. Four or more LIPs fall into the strong/medium categories of indication squares, thus the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong indication that adherence to PG structure related principles is positively associated with the adherence to PM common practices for planning stage.

Therefore, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to structure and adherence to planning stage PM common practices in Nigeria is in accordance with what is proposed by previous literature.

**Adherence to PG structure principles versus adherence to PM Executing and controlling stage common practices**

	Relationship			
Adherence to PG Structure Principles	<b>Strong</b>	Weak	Medium	Strong LIP 2, 5
	<b>Medium</b>	Medium	Strong LIP 6	Medium LIP 4
	<b>Weak</b>	Strong LIP 1	Medium LIP 3	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Executing and Controlling stage common practices			

**Matrix 6.2c:** *adherence to PG structure principles versus adherence to PM Executing and controlling stage common practices*

**Results**

The adherence to PG principles relating to structure, in LIP 1 showed a weak adherence as only one out of the five related PG principles was adhered to. The adherence to PM executing and controlling stage common practices was weak as LIP 1 adhered only two of the fourteen practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 2 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as ten out of the fourteen practices for this stage were adhered to by LIP 2.

In terms of adherence to PG principles relating to structure, LIP 3 showed a weak adherence as only one of the two related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as only ten out of the fourteen practices for this stage were adhered to by LIP 3.

In terms of adherence to PG principles relating to structure, LIP 4 showed a medium adherence as two out of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices

was strong as eleven out of the fourteen practices for this stage were adhered to by LIP 4.

In terms of adherence to PG principles relating to structure, LIP 5 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as LIP 5 adhered all of the fourteen practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 6 showed a medium adherence as two out of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as nine out of the fourteen practices for this stage were adhered to by LIP 6.

## **Discussions**

Levitt et al (1980) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.2c, the indication square category with the highest number of LIPs (majority of the LIPs; four out of the six LIPs) is the strong indication square. Four or more LIPs fall into the strong/medium categories of indication squares, thus the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong indication that adherence to PG structure related principles is positively associated with the adherence to PM common practices for executing and controlling stage.

So, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to structure and adherence to executing and controlling stage PM common practices in Nigeria is in accordance with what is proposed by previous literature.



### Adherence to PG structure principles versus adherence to PM Closing stage common practices

	Relationship			
Adherence to PG Structure principles	<b>Strong</b>	Weak	Medium	Strong LIP 2, 5
	<b>Medium</b>	Medium	Strong	Medium LIP 4, 6
	<b>Weak</b>	Strong LIP 3	Medium	Weak LIP 1
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Closing stage common practices			

**Matrix 6.2d:** *adherence to PG structure principles versus adherence to PM Closing stage common practices*

## Results

The adherence to PG principles relating to structure, in LIP 1 showed a weak adherence as only one out of the five related PG principles was adhered to. The adherence to PM closing stage common practices was strong as LIP 1 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to structure, LIP 2 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM closing stage common practices was strong as LIP 2 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to structure, LIP 3 showed a weak adherence as only one of the two related PG principles were adhered to. The adherence to PM closing stage common practices was weak as LIP 3 adhered none of the two practices for this stage to.

In terms of adherence to PG principles relating to structure, LIP 4 showed a medium adherence as two out of the five related PG principles were adhered

to. The adherence to PM closing stage common practices was medium as LIP 4 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to structure, LIP 5 showed a strong adherence as all of the five related PG principles were adhered to. The adherence to PM closing stage common practices was strong as LIP 5 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to structure, LIP 6 showed a medium adherence as two out of the five related PG principles were adhered to. The adherence to PM closing stage common practices was medium as LIP 6 adhered to all two of the two practices for this stage.

## **Discussions**

Levitt et al (1980) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.2d, the indication square category with the highest number of LIPs (majority of the LIPs; three out of the six LIPs) is the strong indication square. Four or more LIPs fall into the strong/medium categories of indication squares, thus the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong indication that adherence to PG structure related principles is positively associated with the adherence to PM common practices for closing stage.

Therefore, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to structure and adherence to closing stage PM common practices in Nigeria is in accordance with what is proposed by previous literature.

### Adherence to PG people principles versus adherence to PM Initiating stage common practices

	Relationship			
Adherence to PG People principles	<b>Strong</b>	Weak	Medium	Strong LIP 5
	<b>Medium</b>	Medium LIP 2, 3	Strong	Medium
	<b>Weak</b>	Strong LIP 1, 6	Medium LIP 4	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Initiating stage common practices			

**Matrix 6.3a:** adherence to PG people principles versus adherence to PM Initiating stage common practices

### Results

In terms of adherence to PG principles relating to people, LIP 1 showed a weak adherence as zero out of the two related PG principles was adhered to. The adherence to PM initiating stage common practices was weak, as LIP 1 adhered none of the four practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 2 showed a medium adherence one out of the two related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as one out of the four practices for this stage were adhered to by LIP 2.

In terms of adherence to PG principles relating to people, LIP 3 showed a medium adherence as only one of the two related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as LIP 3 adhered none out of the four practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 4 showed a medium adherence as zero out of the two related PG principles were adhered to. The adherence to PM initiating stage common practices was medium as LIP 4 adhered two out of the four practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 5 showed a strong adherence as both of the two related PG principles were adhered to. The adherence to PM initiating stage common practices was strong as LIP 5 adhered all of the four practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 6 showed a weak adherence as zero out of the two related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as one out of the four practices for this stage were adhered to by LIP 6.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.3a, the indication squares categories with the highest number of LIPs (majority of the LIPs; three out of the six LIPs) are the strong and medium indication square. Four or more LIPs fall into the strong/medium categories of indication squares, thus the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is an uncertain level of indication that adherence to PG people related principles is positively associated with the adherence to PM common practices for initiating stage.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to people and adherence to initiating stage PM common practices in Nigeria is in accordance with what is proposed by previous literature.

### Adherence to PG people principles versus adherence to PM Planning stage common practices

	Relationship			
Adherence to PG People principles	<b>Strong</b>	Weak	Medium	Strong LIP 5
	<b>Medium</b>	Medium LIP 3	Strong	Medium LIP 2
	<b>Weak</b>	Strong LIP 1	Medium LIP 4	Weak Lip 6
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Planning stage common practices			

**Matrix 6.3b:** *adherence to PG people principles versus adherence to PM Planning stage common practices*

#### Results

In terms of adherence to PG principles relating to people, LIP 1 showed a weak adherence as zero out of the two related PG principles was adhered to. The adherence to PM planning stage common practices was weak as LIP 1 adhered to only one of the nineteen practices for this stage.

In terms of adherence to PG principles relating to people, LIP 2 showed a medium adherence one out of the two related PG principles were adhered to. The adherence to PM planning stage common practices was strong as LIP 2 adhered sixteen out of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 3 showed a medium adherence as only one of the two related PG principles were adhered to. The adherence to PM planning stage common practices was weak as only one out of the nineteen practices for this stage were adhered to by LIP 3.

In terms of adherence to PG principles relating to people, LIP 4 showed a medium adherence as zero out of the two related PG principles were

adhered to. The adherence to PM planning stage common practices was medium as LIP 4 adhered nine out of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 5 showed a strong adherence as both of the two related PG principles were adhered to. The adherence to PM planning stage common practices was strong as LIP 5 adhered all of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 6 showed a weak adherence as zero out of the two related PG principles were adhered to. The adherence to PM planning stage common practices was medium as LIP 6 adhered nine out of the nineteen practices for this stage to.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.3b, the indication squares category with the highest number of LIPs (majority of the LIPs; three out of the six LIPs) is the medium indication square. Four or more LIPs fall into the strong/medium categories of indication squares, thus the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is an uncertain level of indication that adherence to PG people related principles is positively associated with the adherence to PM common practices for planning stage.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to people and adherence to planning stage PM common practices in Nigeria is intermediately in accordance with what is proposed by previous literature.

**Adherence to PG people principles versus adherence to PM Executing and controlling stage common practices**

	Relationship			
Adherence to PG People principles	<b>Strong</b>	Weak	Medium	Strong LIP 5
	<b>Medium</b>	Medium	Strong LIP 3	Medium LIP 2
	<b>Weak</b>	Strong LIP 1	Medium LIP 6	Weak LIP 4
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Executing and Controlling stage common practices			

**Matrix 6.3c:** *adherence to PG people principles versus adherence to PM Executing and controlling stage common practices*

**Results**

In terms of adherence to PG principles relating to people, LIP 1 showed a weak adherence as zero out of the two related PG principles was adhered to. The adherence to PM executing and controlling stage common practices was weak as LIP 1 adhered only two of the fourteen practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 2 showed a medium adherence one out of the two related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as ten out of the fourteen practices for this stage were adhered to by LIP 2.

In terms of adherence to PG principles relating to people, LIP 3 showed a medium adherence as only one of the two related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as only ten out of the fourteen practices for this stage were adhered to by LIP 3.

In terms of adherence to PG principles relating to people, LIP 4 showed a medium adherence as zero out of the two related PG principles were

adhered to. The adherence to PM executing and controlling stage common practices was strong as eleven out of the fourteen practices for this stage were adhered to by LIP 4.

In terms of adherence to PG principles relating to people, LIP 5 showed a strong adherence as both of the two related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as LIP 5 adhered all of the fourteen practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 6 showed a weak adherence as zero out of the two related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as nine out of the fourteen practices for this stage were adhered to by LIP 6.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.3c, the indication squares category with the highest number of LIPs (majority of the LIPs; three out of the six LIPs) is the strong indication square. Four or more LIPs fall into the strong/medium categories of indication squares, thus the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is an uncertain level of indication that adherence to PG people related principles is positively associated with the adherence to PM common practices for executing and controlling stage.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to people and adherence to executing and controlling stage PM common practices in Nigeria is intermediately in accordance with what is proposed by previous literature.



### Adherence to PG people principles versus adherence to PM Closing stage common practices

	Relationship			
Adherence to PG People principles	<b>Strong</b>	Weak	Medium	Strong LIP 5
	<b>Medium</b>	Medium LIP 3	Strong	Medium LIP 2
	<b>Weak</b>	Strong	Medium	Weak LIP 1, 4, 6
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Closing stage common practices			

**Map 6.3d:** *adherence to PG people principles versus adherence to PM Closing stage common practices*

#### Results

In terms of adherence to PG principles relating to people, LIP 1 showed a weak adherence as zero out of the two related PG principles was adhered to. The adherence to PM closing stage common practices was strong as LIP 1 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to people, LIP 2 showed a medium adherence one out of the two related PG principles were adhered to. The adherence to PM closing stage common practices was strong as LIP 2 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to people, LIP 3 showed a medium adherence as only one of the two related PG principles were adhered to. The adherence to PM closing stage common practices was weak as LIP 3 adhered none of the two practices for this stage to.

In terms of adherence to PG principles relating to people, LIP 4 showed a medium adherence as zero out of the two related PG principles were adhered to. The adherence to PM closing stage common practices was medium as LIP 4 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to people, LIP 5 showed a strong adherence as both of the two related PG principles were adhered to. The adherence to PM closing stage common practices was strong as LIP 5 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to people, LIP 6 showed a weak adherence as zero out of the two related PG principles were adhered to. The adherence to PM closing stage common practices was medium as LIP 6 adhered to all two of the two practices for this stage.

## **Discussions**

Levitt et al (2006) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.3c, the indication squares category with the highest number of LIPs (majority of the LIPs; three out of the six LIPs for weak while two for medium and one for strong) is the weak indication square. However as not up to four or more LIPs falls into the strong/medium or the weak categories of indication squares, thus, the nature of the relationship here is uncertain. This implies that in LIPs implemented in Nigeria, there is a weak level of indication that adherence to PG people related principles is associated with the adherence to PM common practices for closing stage and the nature of the relationship is uncertain.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to people and adherence to closing stage PM common practices in Nigeria is uncertain. Hence, this proposition is not in accordance with what is proposed by previous literature. This proposition will be looked into in further details in the conclusions chapter (chapter 7).

## Adherence to PG information principles versus adherence to PM Initiating stage common practices

	Relationship			
Adherence to PG Information principles	<b>Strong</b>	Weak LIP 2, 6	Medium LIP 4	Strong LIP 5
	<b>Medium</b>	Medium	Strong	Medium
	<b>Weak</b>	Strong LIP 1, 3	Medium	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Initiating stage common practices			

**Matrix 6.4a:** adherence to PG information principles versus adherence to PM Initiating stage common practices

## Results

In terms of adherence to PG principles relating to information, LIP 1 showed a weak adherence as one out of the five related PG principles was adhered to. The adherence to PM initiating stage common practices was weak as LIP 1 adhered none of the four practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 2 showed a strong adherence four out of the five related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as one out of the four practices for this stage were adhered to by LIP 2.

In terms of adherence to PG principles relating to information, LIP 3 showed a weak adherence as only one of the five related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as LIP 3 adhered none out of the four practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 4 showed a strong adherence as five out of the five related PG principles were adhered

to. The adherence to PM initiating stage common practices was medium as LIP 4 adhered two out of the four practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 5 showed a strong adherence as five out of the five related PG principles were adhered to. The adherence to PM initiating stage common practices was strong as LIP 5 adhered all of the four practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 6 showed a strong adherence as four out of the five related PG principles were adhered to. The adherence to PM initiating stage common practices was weak as one out of the four practices for this stage were adhered to by LIP 6.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.4a, the indication squares category with the highest number of LIPs (majority of the LIPs; three out of the six LIPs for both strong, two for weak and one for medium) is the strong indication square. Also as up to four or more LIPs falls into the strong/medium categories of indication squares, thus, the nature of the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong level of indication that adherence to PG information related principles is associated with the adherence to PM common practices for initiating stage and the nature of the relationship is positive.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to information and adherence to initiating stage PM common practices in Nigeria is positive. Hence, this proposition is in accordance with what is proposed by previous literature.

### Adherence to PG information principles versus adherence to PM Planning stage common practices

	Relationship			
Adherence to PG Information principles	<b>Strong</b>	Weak	Medium LIP 4	Strong LIP 5, 2, 6
	<b>Medium</b>	Medium	Strong	Medium
	<b>Weak</b>	Strong LIP 1, 3	Medium	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Planning stage common practices			

**Matrix 6.4b:** *adherence to PG information principles versus adherence to PM Planning stage common practices*

#### Results

In terms of adherence to PG principles relating to information, LIP 1 showed a weak adherence as one out of the five related PG principles was adhered to. The adherence to PM planning stage common practices was weak as LIP 1 adhered to only one of the nineteen practices for this stage.

In terms of adherence to PG principles relating to information, LIP 2 showed a strong adherence four out of the five related PG principles were adhered to. The adherence to PM planning stage common practices was strong as LIP 2 adhered sixteen out of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 3 showed a weak adherence as only one of the five related PG principles were adhered to. The adherence to PM planning stage common practices was weak as only one out of the nineteen practices for this stage were adhered to by LIP 3.

In terms of adherence to PG principles relating to information, LIP 4 showed a strong adherence as five out of the five related PG principles were adhered

to. The adherence to PM planning stage common practices was medium as LIP 4 adhered nine out of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 5 showed a strong adherence as five out of the five related PG principles were adhered to. The adherence to PM planning stage common practices was strong as LIP 5 adhered all of the nineteen practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 6 showed a strong adherence as four out of the five related PG principles were adhered to. The adherence to PM planning stage common practices was medium as LIP 6 adhered nine out of the nineteen practices for this stage to.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.4b, the indication squares category with the highest number of LIPs (majority of the LIPs; five out of the six LIPs for strong) is the strong indication square. Also as up to four or more LIPs falls into the strong/medium categories of indication squares, thus, the nature of the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong level of indication that adherence to PG information related principles is associated with the adherence to PM common practices for planning stage and the nature of the relationship is positive.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to information and adherence to planning stage PM common practices in Nigeria is positive. Hence, this proposition is in accordance with what is proposed by previous literature.

**Adherence to PG information principles versus adherence to PM  
Executing and controlling stage common practices**

	Relationship			
Adherence to PG Information principles	<b>Strong</b>	Weak	Medium LIP 6	Strong LIP 2, 4, 5
	<b>Medium</b>	Medium	Strong	Medium
	<b>Weak</b>	Strong LIP 1	Medium LIP 3	Weak
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Executing and Controlling stage common practices			

**Matrix 6.4c:** *adherence to PG information principles versus adherence to PM  
Executing and controlling stage common practices*

## Results

In terms of adherence to PG principles relating to information, LIP 1 showed a weak adherence as one out of the five related PG principles was adhered to. The adherence to PM executing and controlling stage common practices was weak as LIP 1 adhered only two of the fourteen practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 2 showed a strong adherence four out of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as ten out of the fourteen practices for this stage were adhered to by LIP 2.

In terms of adherence to PG principles relating to information, LIP 3 showed a weak adherence as only one of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as only ten out of the fourteen practices for this stage were adhered to by LIP 3.

In terms of adherence to PG principles relating to information, LIP 4 showed a strong adherence as five out of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as eleven out of the fourteen practices for this stage were adhered to by LIP 4.

In terms of adherence to PG principles relating to information, LIP 5 showed a strong adherence as five out of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as LIP 5 adhered all of the fourteen practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 6 showed a strong adherence as four out of the five related PG principles were adhered to. The adherence to PM executing and controlling stage common practices was strong as nine out of the fourteen practices for this stage were adhered to by LIP 6.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.4c, the indication squares category with the highest number of LIPs (majority of the LIPs; four out of the six LIPs for strong) is the strong indication square. Also as up to four or more LIPs falls into the strong/medium categories of indication squares, thus, the nature of the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong level of indication that adherence to PG information related principles is associated with the adherence to PM common practices for executing and controlling stage and the nature of the relationship is positive. Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to information and



adherence to executing and controlling stage PM common practices in Nigeria is positive. Hence, this proposition is in accordance with what is proposed by previous literature.

#### **Adherence to PG information principles versus adherence to PM closing stage common practices**

	Relationship			
Adherence to PG Information principles	<b>Strong</b>	Weak	Medium	Strong LIP 2, 4, 5, 6
	<b>Medium</b>	Medium	Strong	Medium
	<b>Weak</b>	Strong LIP 3	Medium	Weak LIP 1
		<b>Weak</b>	<b>Medium</b>	<b>Strong</b>
	Adherence to PM Closing stage common practices			

**Matrix 6.4d:** *adherence to PG information principles versus adherence to PM Closing stage common practices*

#### **Results**

In terms of adherence to PG principles relating to information, LIP 1 showed a weak adherence as one out of the five related PG principles was adhered to. The adherence to PM closing stage common practices was strong as LIP 1 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to information, LIP 2 showed a strong adherence four out of the five related PG principles were adhered to. The adherence to PM closing stage common practices was strong as LIP 2 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to information, LIP 3 showed a weak adherence as only one of the five related PG principles were adhered to. The adherence to PM closing stage common practices was weak as LIP 3 adhered none of the two practices for this stage to.

In terms of adherence to PG principles relating to information, LIP 4 showed a strong adherence as five out of the five related PG principles were adhered

to. The adherence to PM closing stage common practices was medium as LIP 4 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to information, LIP 5 showed a strong adherence as five out of the five related PG principles were adhered to. The adherence to PM closing stage common practices was strong as LIP 5 adhered to all two of the two practices for this stage.

In terms of adherence to PG principles relating to information, LIP 6 showed a strong adherence as four out of the five related PG principles were adhered to. The adherence to PM closing stage common practices was medium as LIP 6 adhered to all two of the two practices for this stage.

## **Discussions**

Levitt et al (2009) and APM (2011) both agree that strong adherence to project governance would provide a uniform technique/application for best (common) practice by monitoring and controlling the choice of PM techniques to be used against their suitability for the project. Thus, the adherence to the PM common practices should be strong when strong adherence to PGP is achieved; which is a positive relationship.

From matrix 6.4d, the indication squares category with the highest number of LIPs (majority of the LIPs; five out of the six LIPs for strong) is the strong indication square. Also as up to four or more LIPs falls into the strong/medium categories of indication squares, thus, the nature of the relationship here is positive. This implies that in LIPs implemented in Nigeria, there is a strong level of indication that adherence to PG information related principles is associated with the adherence to PM common practices for closing stage and the nature of the relationship is positive.

Consequently, from the result of this analysis, it can be proposed that the relationship between adherence to PGP relating to information and adherence to closing stage PM common practices in Nigeria is positive. Hence, this proposition is in accordance with what is proposed by previous literature.

### **6.3 Examining the influence of adherence to PGPs on the adverse impact of external factors seen in the LIPs using PEST analysis**

To understand how adherence to PGPs influenced the reduction of adverse impact of external factors in the studied LIPs, it is important to examine the level of adherence to PGPs in each of the LIPs against the level of adverse impact from external factors that each experienced; this section will present the examination.

To measure the relationship in between adherence to PGPs and level of adverse impact of the external factors (PEST), the following metric will be used.

#### **Positive relationship:**

- When majority of the LIPs have strong adherence to PGP producing minor or medium adverse impact

#### **Non-positive relationship:**

- When majority of the LIPs have weak adherence to PGP producing minor adverse impact

#### **6.3.1 PGP adherence versus political factors (PF)**

The review of previous literatures on the importance of adhering to PGP suggests that adherence to PGPs should be positively associated with the removal or reduction of adverse impacts from political factors in project (Flyvbjerg et al 2003; Bekker et al 2008; Flyvbjerg et al 2002: 286; Flyvbjerg 2005a; Aibinu et al 2002). Thus, LIPs with strong adherence to PGPs should have minor or at the most medium adverse political impact on its performance. On the other hand, LIPs with weak adherence should have strong or at least medium adverse political impact on its performance.

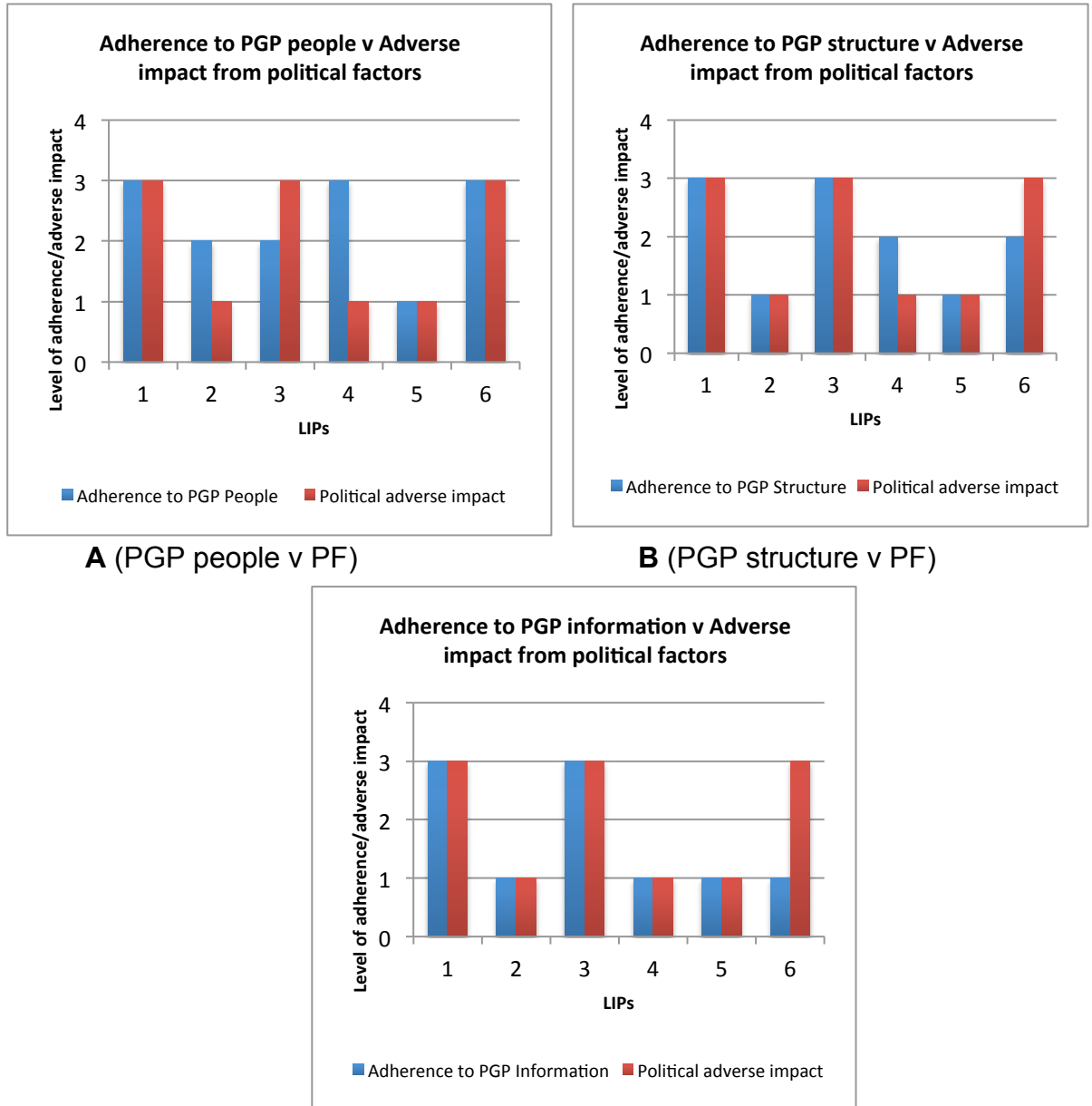
In LIP 1 and 3 both had weak adherences to structure and information related PG principle and had major adverse impact from all three political

factors (see fig 6.1). Whereas, in LIP 2, 4 and 5 the adverse influence of all three political factors; the unstable political environment in Nigeria, political interference on project decisions and poor government policies; had minor impact on the LIPs performance. LIP 2, 4 and 5 all had strong/medium adherences to PGP structure and information related PGPs. Therefore, there is an indication that adherence to PG structure and information related principles in particular have a positive relationship with the reduction/removal of adverse impact of political factors on LIPs. On the other hand, LIP 6 had strong adherence to information related PGPs but had a minor political adverse impact. This could be due to the fact that the project sponsors (government) wanted to ensure the LIP was delivered on time as it was in the capital of the country. Hence the sponsor interfered often in the LIP. Also for people related PGPs, the LIPs 1, 2, 5 and 6 show an association between adherence to PGPs and reduction/removal of adverse impact of political factors.

Therefore, as majority (four or more out of six LIPs studied) of the LIPs are consistent with the proposition that a positive relation exists between adherence to people, structure and information related PGPs and reduction/removal of adverse impact of political factors on LIPs, then there is a strong indication that this proposition is accurate.

Thus, this proposition implies that what was suggested in previous literature about the supposed relationship between adherence to PGPs and reduction/removal of the adverse impact of external factors to projects; using developed economies; is applicable in Nigeria as an example of a developing economy.

For level of adherence to PGP: Strong = 1, Medium = 2 and Weak = 3  
For level of adverse impact from PEST: Minor = 1, Medium = 2 and Major = 3



**A** (PGP people v PF)

**B** (PGP structure v PF)

**Figure 6.1:** Adherence to people; information and structure related PGPs v political factors

### 6.3.2 PGP adherence versus economic factors (EF)

The review of previous literatures on the importance of adhering to PGP suggests that adherence to PGPs should be positively associated with the removal or reduction of adverse impacts from economic factors in project (Flyvbjerg et al 2003; Bekker et al 2008; Flyvbjerg et al 2002: 286; Flyvbjerg 2005a; Aibinu et al 2002). Thus, LIPs with strong adherence to PGPs should have minor or at the most medium adverse economic impact on its performance. On the other hand, LIPs with weak adherence should have strong or at least medium adverse economic impact on its performance.

For structure related PGPs, LIPs 1, 2, 3, 4 and 5 had their adherence levels corresponding to the level of adverse economic impact (see fig 6.2B); strong adherence produced minor adverse impact and weak adherence produced major adverse impact; while LIP 6 had slight difference in the level of adherence to PGPs and the level of adverse economic impact; this indicates that there is a positive relationship.

For information related PGPs, LIPs 1, 2, 3, and 5 all show had their adherence levels corresponding to the level of adverse economic impact (see fig 6.2C); strong adherence produced minor adverse impact and weak adherence produced major adverse impact. This indicates that strong adherence to PG information related principles has an association with reducing the adverse impact of economic factors.

Similarly for people related PGPs, LIPs 1, 5 and 6 all show had their adherence levels corresponding to the level of adverse economic impact (see fig 6.2A); while LIPs 2, 3 and 4 show slightly non-corresponding relationship. Thus, the adherence to PG principles relating to people and the adverse impact of the economic factors also shows positive relationship. Therefore, this indicates that there is a positive relationship between adherences to all PGPs and the level of adverse impact that the economic factors in Nigeria has on the LIPs.

Thus, this proposition implies that what was suggested in previous literature about the supposed relationship between adherence to PGPs and

reduction/removal of the adverse impact of external factors to projects; using developed economies; is applicable in Nigeria as an example of a developing economy.

For level of adherence to PGP: Strong = 1, Medium = 2 and Weak = 3  
 For level of adverse impact from PEST: Minor = 1, Medium = 2 and Major = 3



**Figure 6.2:** Adherence to people; information and structure related PGPs v economic factors

### 6.3.3 PGP adherence versus socio-cultural factors (S-CF)

The review of previous literatures on the importance of adhering to PGP suggests that adherence to PGPs should be positively associated with the removal or reduction of adverse impacts from socio-cultural factors in project (Flyvbjerg et al 2003; Bekker et al 2008; Flyvbjerg et al 2002: 286; Flyvbjerg 2005a; Aibinu et al 2002). Thus, LIPs with strong adherence to PGPs should have minor or at the most medium adverse socio-cultural impact on its performance. On the other hand, LIPs with weak adherence should have strong or at least medium adverse socio-cultural impact on its performance.

For structure related PGPs, LIPs 1, 3, 5 and 6 had their adherence levels corresponding to the level of adverse socio-cultural impact (see fig 6.3B); strong adherence produced minor adverse impact and weak adherence produced major adverse impact; while LIP 2 and 4 had slight difference in the level of adherence to PGPs and the level of adverse socio-cultural impact; this indicates that there is a positive relationship as all of the LIPs show positive association.

For information related PGPs, LIPs 1, 3, 4 and 5 all show had their adherence levels corresponding to the level of adverse technological impact (see fig 6.3C); while LIP 2 and 6 had slight difference in the level of adherence to PGPs and the level of adverse socio-cultural impact This indicates that strong adherence to PG information related principles has an association with reducing the adverse impact of socio-cultural factors.

Similarly for people related PGPs, LIPs 1, 2 and 5 all show had their adherence levels corresponding to the level of adverse socio-cultural impact (see fig 6.3A); while LIPs 3 and 6 show slightly non-corresponding relationship. However, LIP 4 shows non-correspondence; strong adherence produced major adverse impact and weak adherence produced minor adverse impact. This indicates non-positive relationship for LIP 4; the reason for this is unclear. However, as five out of six of the LIPs show reasonable association, there is a strong indication that the relationship between adherence to PG principles relating to people and the reducing/removing adverse impact of the socio-cultural factors is positive.

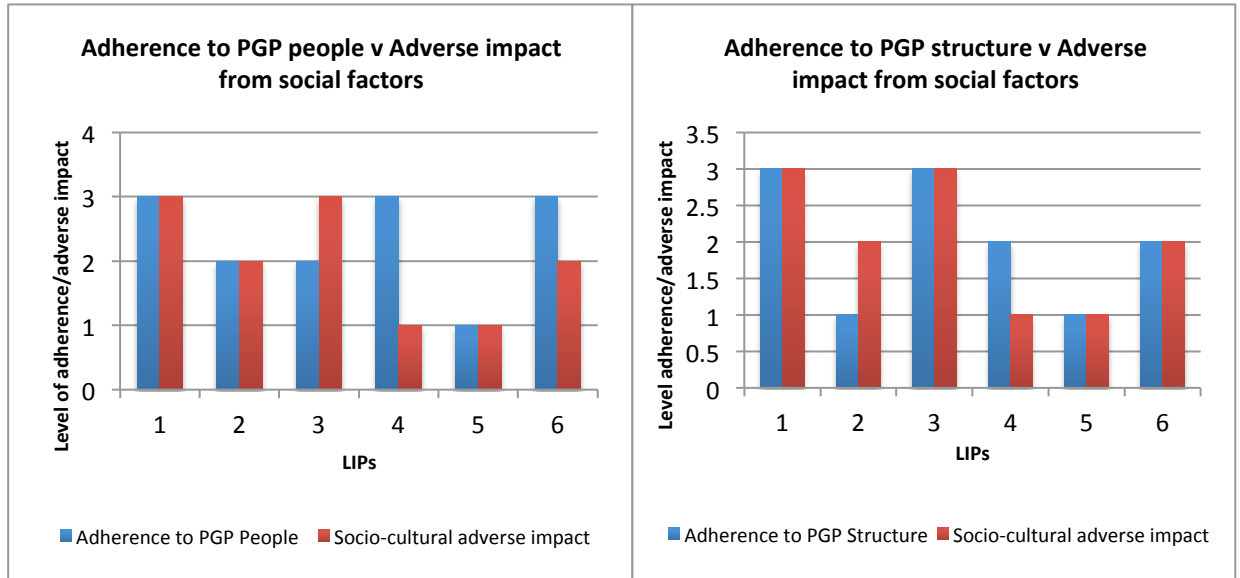


Thus, this proposition implies that what was suggested in previous literature about the supposed relationship between adherence to PGPs and reduction/removal of the adverse impact of external factors to projects; using developed economies; is applicable in Nigeria as an example of a developing economy.

In LIP 5 for example, the contractor and consultants made use of internationally used management tool and applied standard processes throughout the project, which suggest a good level of education and skills level. Workers were trained for different roles they had to carryout and expatriates were brought in when necessary. Project activities and stages were properly monitored and controlled using consultants. The result of this is that the project was well managed; monitored and controlled thus there was minor or no adverse impact from the poor level of education and skills in the country. The PG structure, people and information disclosure principles were all strongly adhered to in this LIP.

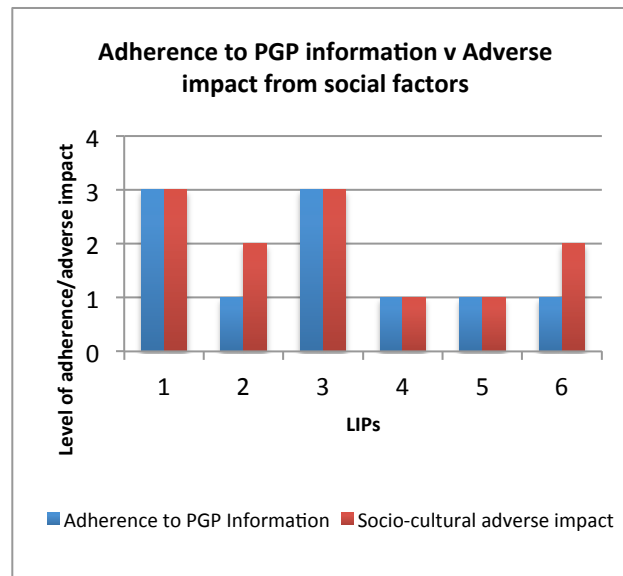
Furthermore, LIP 2 showed strong adherence to PG structure and information related principles and during the project lifecycle. The workers involved in the project were highly skilled people, consultants and independent scrutiny was used when necessary. The impact of the two social factors is also minor on the general performance of the project.

**For level of adherence to PGP:** Strong = 1, Medium = 2 and Weak = 3  
**For level of adverse impact from PEST:** Minor = 1, Medium = 2 and Major = 3



**A** (PGP people v S-CF)

**B** (PGP structure v S-CF)



**C** (PGP information v S-CF)

**Figure 6.3:** Adherence to people; information and structure related PGPs v socio-cultural factors

#### 6.3.4 PGP adherence versus technological factors (TF)

The review of previous literatures on the importance of adhering to PGP suggests that adherence to PGPs should be positively associated with the removal or reduction of adverse impacts from technological factors in project (Flyvbjerg et al 2003; Bekker et al 2008; Flyvbjerg et al 2002: 286; Flyvbjerg 2005a; Aibinu et al 2002). Thus, LIPs with strong adherence to PGPs should have minor or at the most medium adverse technological impact on its performance. On the other hand, LIPs with weak adherence should have strong or at least medium adverse technological impact on its performance.

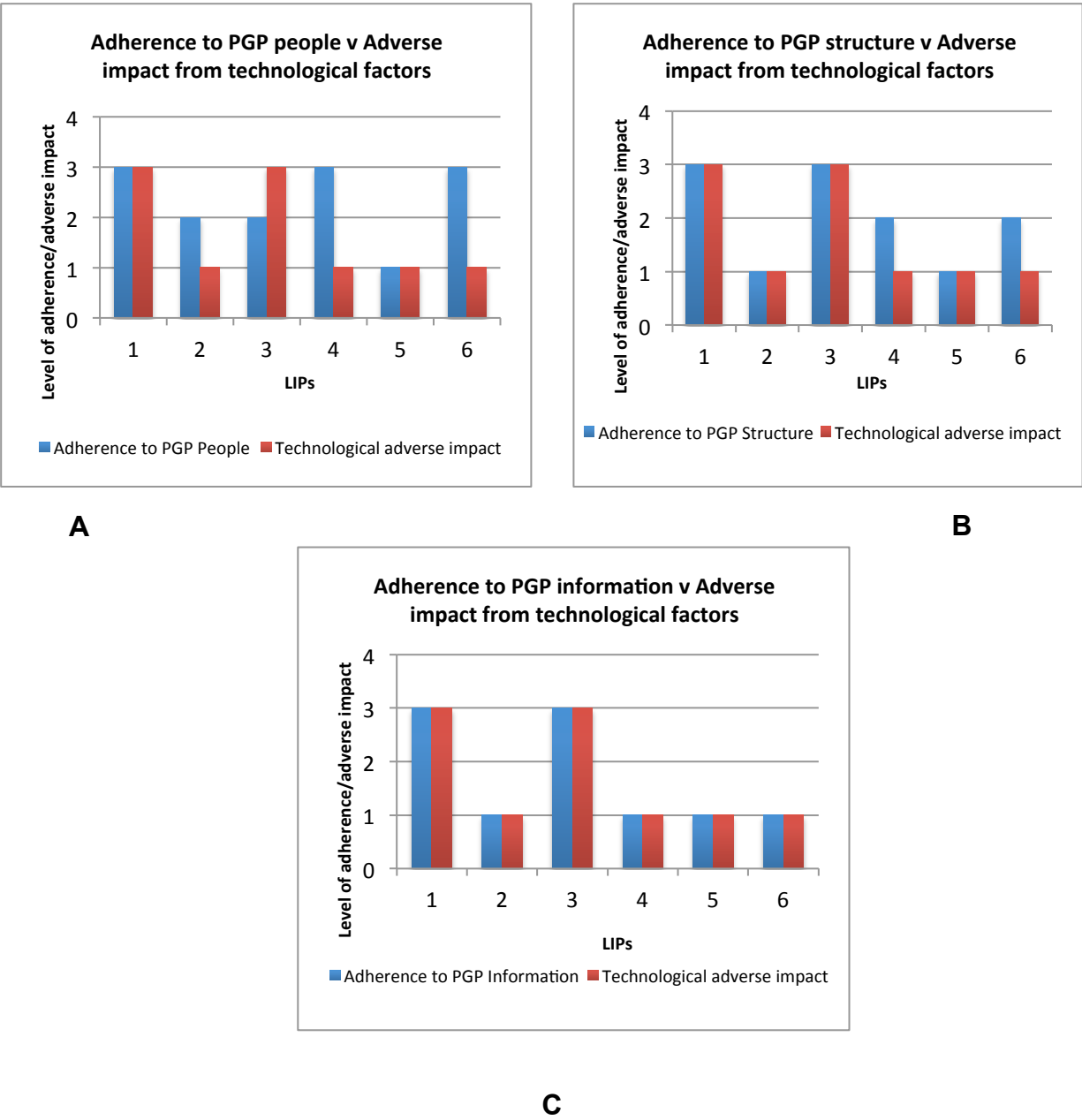
For structure related PGPs, LIPs 1, 2, 3 and 5 had their adherence levels corresponding to the level of adverse technological impact (see fig 6.4B); strong adherence produced minor adverse impact and weak adherence produced major adverse impact; while LIP 4 and 6 had slight difference in the level of adherence to PGPs and the level of adverse technological impact; this indicates that there is a positive relationship.

For information related PGPs, LIPs 1, 2, 3, 4, 5 and 6 all show had their adherence levels corresponding to the level of adverse technological impact (see fig 6.4C); strong adherence produced minor adverse impact and weak adherence produced major adverse impact. This indicates that strong adherence to PG information related principles has an association with reducing the adverse impact of technological factors.

Similarly for people related PGPs, LIPs 1 and 5 all show had their adherence levels corresponding to the level of adverse technological impact (see fig 6.4A); while LIPs 2 and 3 show slightly non-corresponding relationship. However, LIP 4 and 6 show non-correspondence; strong adherence produced major adverse impact and weak adherence produced minor adverse impact. This indicates non-positive relationship for LIPs 4 and 6; the reason for this is unclear. However, as four out of six of the LIPs show reasonable association, the relationship between adherence to PG principles relating to people and the reducing/removing adverse impact of the technological factors is positive.

Thus, this proposition implies that what was suggested in previous literature about the supposed relationship between adherence to PGPs and reduction/removal of the adverse impact of external factors to projects; using developed economies; is applicable in Nigeria as an example of a developing economy.

**For level of adherence to PGP:** Strong = 1, Medium = 2 and Weak = 3  
**For level of adverse impact from PEST:** Minor = 1, Medium = 2 and Major = 3



**Figure 6.4:** Adherence to people; information and structure related PGPs v technological factors

## 6.4 Chapter summary

This chapter has presented the analysis of the relationships between adherence to PGPs and adherence to PM common practices and the relationship between adherence to PGPs and LIPs performances in terms of meeting their original estimations. It has also presented the impact of the adverse political, economic, social and technological circumstances in Nigeria on the performance of the LIPs.

There is an indication that the outcome of LIPs in terms of meeting their original estimation is positively associated with their adherence to PGPs (structure, people and information related). Similarly, the adherence to PGPs also showed an indication that there is a positive relationship between it and adherence to the PM common practices. Also, similar relationship exists between adherence to PGPs and the level of adverse impact that external factors had on the LIPs. This implies that all three relationships studied largely agree that the outcome of LIPs in Nigeria is positively associated with adherence to PGPs. Hence, poor adherence to PGPs in LIPs in Nigeria can be strongly associated to the poor outcomes from the LIPs.

The next chapter will further examine the identified relationships in order to reach a final conclusion and answer the research questions comprehensively.

## **CHAPTER 7.0**

### **CONCLUSIONS, RECOMMENDATIONS AND FUTURE STUDY**

#### **7.1 Introduction**

This chapter will present the conclusions drawn from this research, review the research processes and make recommendations for future study. In section 7.2, the review and summary of results in chapters 5 and 6 will be presented before the research questions will be answered in this section. Section 7.3 will highlight the contributions made by this research to the project management and governance field as well as the contribution made to knowledge about the governance of projects in developing economies. Section 7.4 will make an appraisal of the research sample, methodology and recommendations made by respondents before presenting recommendations for future research. Finally section 7.5 will present the summary of this chapter

## **7.2 Answer to research questions**

The results gathered in chapter 5 and 6 will be reviewed in this section to enable answers to be identified for the research questions. The level of adherence to PG principles in each of the LIPs will be reviewed and summarized. The relationship between adherence to PG principles and adherence to PM common practices as well as the relationship between the adherence to PG principles and the performance of the LIPs will be reviewed and summarised. Also, the impact of adverse PEST factors on adherence to PGPs will be reviewed and summarised. The research questions will be answered in subsections 7.2.1.1, 7.2.1.2 and 7.2.1.3

### **7.2.1 Results**

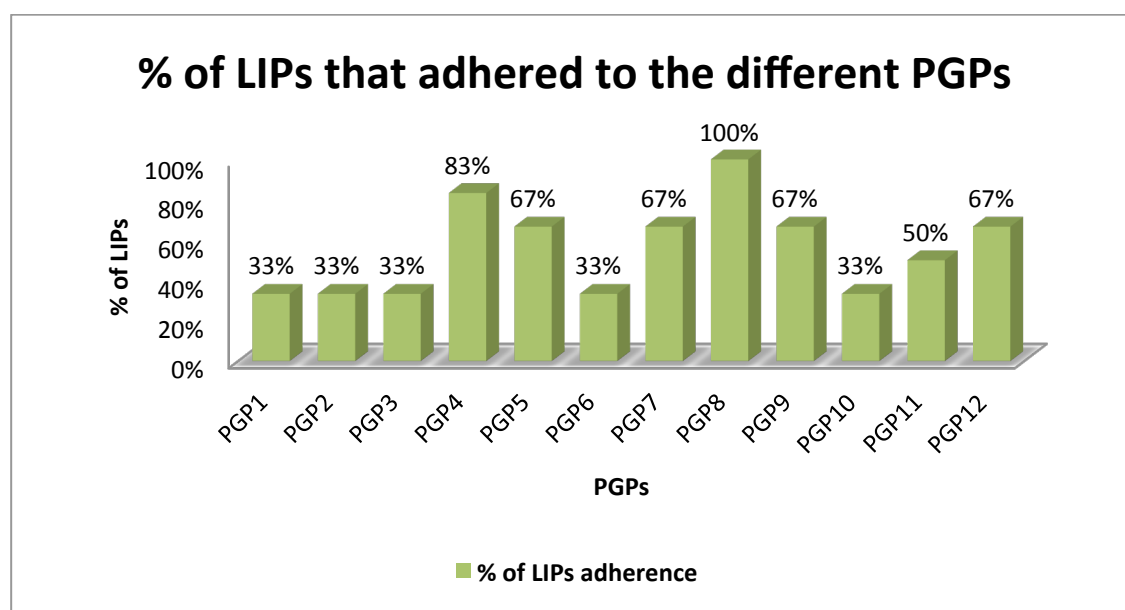
This subsection will review the results summarizing charts from the result from chapter 5 and 6 and discuss how the results provide answers the research questions.

The research question is:

To what extent does adherence to project governance principles have an impact on the outcome of LIPs implemented in developing economies?

The summary of the results is as follows:

**1. To what level do LIPs implemented in developing economies adhere to PG principles?**



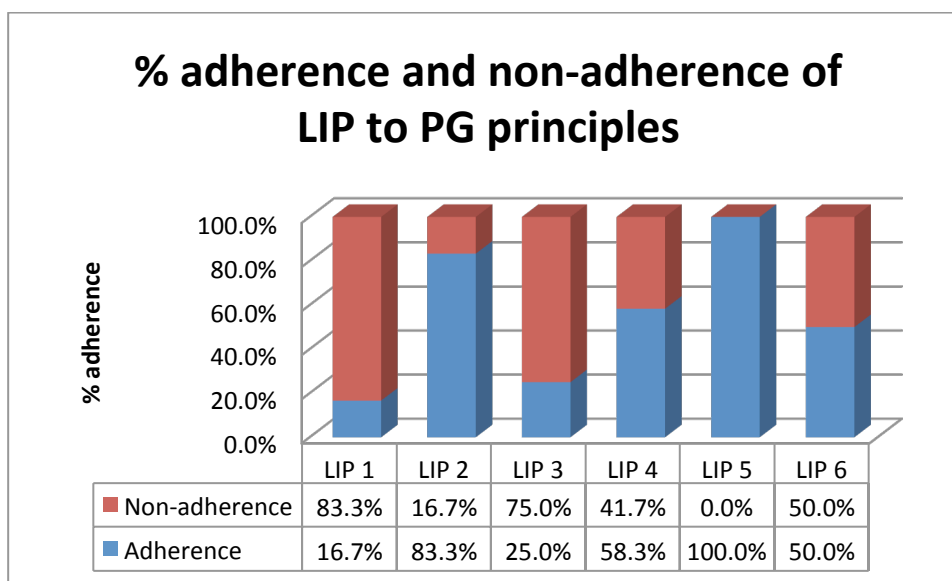
**Figure 7.1:** Percentage of LIPs that adhered to the different PGPs

1. Always = 100% of LIPs adhered
2. Often = 50% to 99% of LIPs adhered
3. Rarely = less than 49% and more than 0% of LIPs adhered
4. Never = 0% of LIP adhered

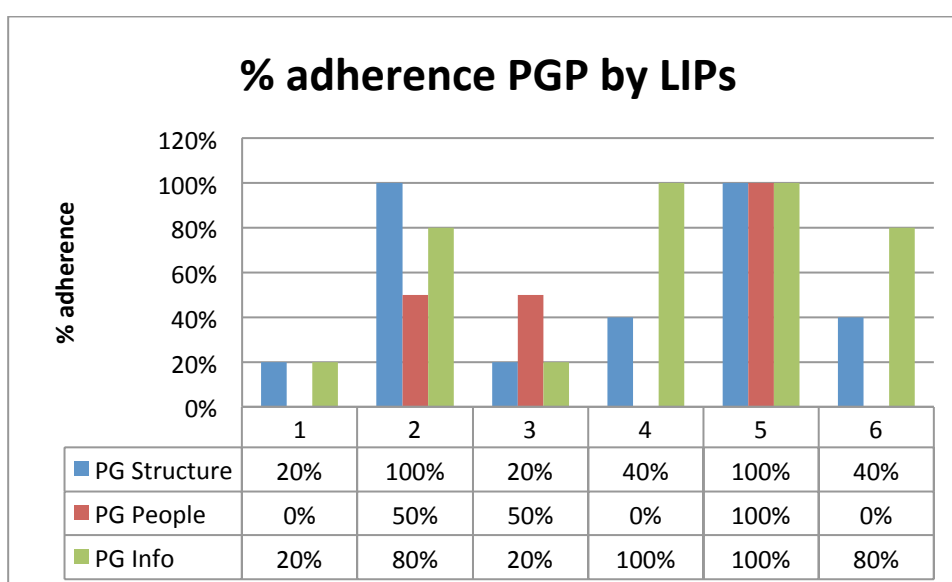
**Results**

1. PGP 8 was always adhered to
2. PGP 4, 5, 7, 9, 11 and 12 are often adhered to
3. PGP 1, 2, 3, 6 and 10 are rarely adhered to





**Figure 7.2:** Percentage of adherence and non-adherence of LIPs to PGPs



**Figure 7.3:** Percentage adherence to PGPs under the categories of structure, people and information related PGPs

**2. What is the relationship between adhering to PG principles and**

LIP	% Overrun from original spec			Performance
	Cost	Duration	Scope	Based on definition in this study
LIP1	46.3%	110%	20%	Poor
LIP2	20%	0%	9%	Excellent
LIP3	200%	100%	70%	Poor (Abandoned)
LIP4	27.8%	30%	13%	Average
LIP5	4%	0%	0%	Excellent
LIP6	66.7%	10%	23%	Average

**Table 7.1: Performance of LIPs in developing countries**

**3. What is the relationship between adhering to PG principles and adherence to PM common practices?**

Adherence to PM practices in LIPs					
LIP	Initiating Stage	Planning Stage	Executing & Controlling Stage	Closing Stage	Performance in terms of adherence to PM
1	None	P9	E3, E13	C1, C2	Initiating = Weak Planning = Weak E & C = Weak Closing = Strong
2	I3	P1, P2, P5, P6, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19	E1, E2, E3, E4, E6, E8, E10, E11, E12, E14	C1, C2	Initiating = Weak Planning = Strong E & C = Strong Closing = Strong
3	None	P9	E2, E4, E5, E6, E7, E9, E10, E11, E13, E14	None	Initiating = Weak Planning = Weak E & C = Medium Closing = Weak
4	I2, I3	P1, P2, P3, P4, P6, P7, P9, P12, P17	E2, E4, E5, E6, E7, E9, E10, E11, E12, E13, E14	C1, C2	Initiating = Medium Planning = Medium E & C = Strong Closing = Strong
5	I1, I2, I3, I4	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19	E1, E2, E3, E4, E5, E6, E7, E9, E10, E11, E12, E13, E14	C1, C2	Initiating = Strong Planning = Strong E & C = Strong Closing = Strong
6	I1	P1, P3, P4, P5, P8, P9, P10, P11, P12	E4, E5, E6, E7, E10, E11, E12, E13, E14	C1, C2	Initiating = Weak Planning = Medium E & C = Strong Closing = Strong

**Table 7.2: Results of adherence to PGPs v PM common practices for LIPs**

### 7.2.2 Conclusions

#### **Structure**

Three out of the five PG principles relating to structure of the governance body; the board/steering committee has overall responsibility for governance of project management. (PGP 1); the roles, responsibilities and performance criteria for the governance of project management are clearly defined. (PGP 2) and disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle. (PGP 3); were rarely adhered to. Out of the other two, PGP 8; the board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly; was always adhered to by the studied LIPs while PGP 12; projects are closed when they are no longer justified as part of the organisation's portfolio; was often adhered to. Therefore, from the results of this research there is an indication that majority of the PGPs relating to structure of the governance body of LIPs are not adhered to.

#### **People**

The results in this research suggests that in LIPs implemented in Nigeria PGP 6; members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions; is rarely adhered to and PGP 11; project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust; is often adhered to. Therefore, it can be deduced that half of the people related PGPs is rarely adhered to whilst the other half is often adhered to by LIPs implemented in Nigeria.

#### **Information**

From the results in chapter 5 and 6, four out of the five PGP relating to information disclosure for the governance body; PGP4; a coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio; PGP5; all projects have an approved plan

containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated; PGP7; The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions; and PGP9; there are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation; were often adhered to. The remaining one; PGP 10; the organisation fosters a culture of improvement and of frank internal disclosure of project information; was rarely adhered to. This suggests that the majority of information related PGPs are often adhered to in LIPs implemented in Nigeria.

#### **7.2.2.2 What is the relationship between adhering to PG principles and performance of LIPs in developing countries?**

##### **Structure PGP relationship with LIP performance**

LIP 2 and 5 performed excellently in terms of meeting their original estimations. This means that in these LIPs, two or three of the project constraints; cost, duration and scope; did not vary from the original estimation by more than 10%.

Linking the performance of LIP 2 and 5 to their adherence to structure related PG principles; it is obvious to see an association between the two. The adherence to structure related PGPs are both strong in LIP 2 and 5, whilst in LIP 1, 3, 4, and 6 where the structure related PGP was less than strong there were also less than excellent performance in meeting the original estimation. This means that only one or none of the project constraints; cost, duration and scope; had an overrun from the original estimations by 10% or less in LIPs 1, 3, 4 and 6.

Therefore, this positive association between the structures related PGPs and the performance of LIPs in meeting their original estimations suggest that when PGP relating to structure are strongly adhered to, an LIP stands a good chance of meeting its original cost, duration and scope estimations.

It is not conclusive to say that adherence to the structure related PGPs is enough to guarantee the excellent performance of an LIP as there are other PGPs that were also adhered to by LIP 2 and 5 which suggest that the other PGPs relating to people and information could also have contributed to the performance of the LIPs. However, there are indications that a positive relationship exist between the structures related PGPs and the performance of LIPs in meeting their original estimations.

In order to evaluate all the other PGPs that are positively associated with the performance of LIPs, the next two headings will focus on identifying the relationship between PGPs relating to people and information respectively.

### **People PGP relationship with LIP performance**

PGP 6 and 11 are the people related principles. Only LIP 5 had a strong adherence to both principles whilst LIP 2 and 3 adhered medially; one each. However, LIP 3 performed poorly in meeting original estimations and reducing the adverse influence of political, economic, social and technological factors while LIP 2 performed excellently in these factors. Also LIP 4 and 6 performed better than LIP 3 regardless of their weak adherence level. This result suggests that adherence to people related PGP does not have a strong association with LIP performance. Indications are that its association with LIP performance is dependent on the adherence to other PGP being adhered to as well. For example LIP 4 and 6 had medium adherence to the structure related PGP but weak adherence (0% adherence) to people related PGPs but still performed satisfactorily in meeting their original estimation. LIP 3 on the other hand adhered weakly to structure related PGPs and medium to people related PGP similarly to LIP 1 which had weak adherence to the people related PGP and weak adherence to structure related PGPs and both performed poorly.

Therefore, from these results, there is an indication that people related PGPs are not positively associated with the performance of LIPs in meeting their original estimations.

### **Information PGP relationship with LIP performance**

The two LIPs that performed poorly in meeting their original estimation; LIP 1 and 3; both had weak adherence to PGP relating to information disclosure whilst LIP 2 and 5 both had strong adherence and both performed excellently. LIP 4 and 6 both performed satisfactorily regardless of having shown strong adherence to PGP relating to information which suggest that their strong adherence to the information related PGP (in isolation) was not sufficient to make their performance excellent.

Therefore, there is an indication that adherence to PGP relating to information have a positive association with the performance of LIPs in meeting their original estimations.

However it is worth noting that LIP 2 and 5, which performed excellently, both adhered strongly to PGPs relating to information and structure whilst LIP 2 had a medium adherence to PGPs relating to people and LIP 5 had a strong adherence to people related PGPs. Thus, when PGPs relating to information and structure are strongly adhered to, the chances of the LIP performing excellently are high.

#### **7.2.2.3 What is the relationship between adhering to PG principles and adherence to PM common practices?**

### **Structure PGP relationship with PM initiating stage common practices**

LIPs 1, 2, 3 and 6 show weak adherence to PM initiating stage common practices (PMI). In these LIPs, resource scoping, expectation gathering and feasibility study were the main PMI common practices that were not adhered to. However, LIP 2 performed strongly in adhering to structure related PGPs, LIP 6 intermediately and LIPs 1 and 3 weakly. LIP 4 and 5 show medium and strong adherence levels to structure related PGPs respectively. Both also show similar adherence pattern for PMI common practices. This shows a weak and medium relationship between adhering to PGP structure and adhering to PMI common practices for LIP 2 and 6 but a positive and strong relationship for the other four LIPs.

Therefore there is an indication that the relationship between the two is positive and strong.

#### **Structure PGP relationship with PM planning stage common practices**

LIPs 1, 2, 3, 4 and 5 all show consistency in their relationship between structure related PGPs and PMP common practices. LIP 1 and 3 both show weak adherences in both PGP structure and PMP common practices. LIP 2 and 5 both show strong adherences for both PGP structure and PMP common practices, while LIP 4 show medium adherence in both PGP structure and PMP common practices. LIP 6 on the other hand, showed medium adherence to PGP structure but show strong adherence to PMP common practices, which is still a positive relationship, but not as strongly associated as in the other LIPs.

Therefore, the results indicate a positive and strong relationship between the adherence to structure related PGPs and adherence to PMP common practices.

#### **Structure PGP relationship with PM executing and controlling stage common practices**

LIPs 1, 2, 5 and 6 all show consistency in their relationship between structures related PGPs and PME common practices. LIP 2 and 5 both show strong adherences in both PGP structure and PME common practices. LIP 1 show weak to weak relationship for adherence to PGP structure and PME common practices while, LIP 6 show medium-to-medium relationship for adherence to PGP structure and PME common practices. LIP 3 and 4 on the other hand, showed weak to medium and medium to strong adherence to PGP structure and PME common practices respectively. This suggests that the relationship between adherence to PGP structure and adherence to PME common practices is positive.

Therefore, the results indicate a positive and strong relationship between the adherence to structure related PGPs and adherence to PME common practices.

### **Structure PGP relationship with PM closing stage common practices**

LIPs 2, 3 and 5 all show consistency in their relationship between structure related PGPs and PMC common practices. LIP 4 and 6 both show medium to strong adherences in PGP structure and PMC common practices. LIP 1 shows weak to strong relationship for adherence to PGP structure and PMC common practices respectively. Thus, three out of the six LIP studied show positive and strong relationship between structures related PGPs and PMC common practices. This suggests that the relationship between adherence to PGP structure and adherence to PMC common practices is positive.

Therefore, the results indicate a positive and strong relationship between the adherence to structure related PGPs and adherence to PMC common practices.

### **People PGP relationship with LIP performance initiating stage common practices**

LIPs 2, 3 and 4 all show medium relationships between people related PGPs and PMI common practices. LIP 1, 5 and 6 on the other hand show strong association in their people related PGPs and PMI adherences relationships. Thus, six out of the six LIP studied show positive relationship between people related PGPs and PMI common practices but the exact strength of this relationship is not clear as there is equal number of medium and strong relationships amongst the six LIPs. Thus based on the data available to this research we cannot draw a conclusion on the strength of this relationship.

### **People PGP relationship with LIP performance planning stage common practices**

LIPs 2, 3, 4 and 6 all show weak or medium relationship between people related PGPs and PMP common practices in terms of medium to medium, weak to weak or strong to strong. LIP 1 and 5 on the other hand show consistency in their people related PGPs and PMP adherences relationships. Thus, four out of the six LIP studied does not show a strong indication of a positive relationship between people related PGPs and PMP common



practices while the other two does. However, LIP 1 and 5 both had extraordinary adherence levels in that both had same adherence levels for all three; structure, people and information; PGP categories. Therefore LIP 1 and 5 cases can be seen as an exception in this case as they are both exceptional circumstances. This suggests that the relationship between adherence to PGP people and adherence to PMP common practice is not positive based on the data available to this research. The strength of this indication is not certain due to the inconsistency in the relationship across the studied LIPs.

### **People PGP relationship with LIP performance executing and controlling stage common practices**

LIPs 1, 3 and 5 all show a strong indication of a positive relationship between people related PGPs and PME common practices in terms of medium to medium, weak to weak or strong to strong corresponding relationships. However, LIP 2, 4 and 6 on the other hand show weak people related PGPs and PME adherences relationships. Thus, three out of the six LIPs studied show a strong indication of a positive relationship between people related PGPs and PME common practices while the other three doesn't. Also, for positive relationship, five out of six show a positive relationship. This suggests that the relationship between adherence to PGP people and adherence to PME common practice is positive based on the data available to this research.

### **People PGP relationship with LIP performance closing stage common practices**

LIPs 1, 2, 3, 4 and 6 all show weak or medium relationships between people related PGPs and PMC common practices in terms of medium to medium, weak to weak or strong to strong corresponding relationships. LIP 5 on the other hand show consistency in their people related PGPs and PMC adherences relationships. Thus, five out of the six LIP studied does not show a strong indication of a positive relationship between people related PGPs and PMC common practices while one does. However, LIP 5 had an extra

ordinary adherence levels in that it had same adherence levels for all three; structure, people and information; PGP categories. Therefore LIP 5 can be seen as an exception in this case as it performed exceptionally well. This suggests that the strength of indication between adherence to PGP people and adherence to PMC common practice is weak and the nature of the relationship is unclear as there is a half split between weak and medium/strong adherences for the six LIPs thus, making the nature neither positive or not-positive.

### **Information PGP relationship with LIP performance initiating stage common practices**

LIPs 1, 3 and 5 all show a strong indication of a positive relationship between information related PGPs and PMI common practices in terms of weak to weak or strong to strong corresponding relationships. However, LIP 2 and 6 on the other hand show weak information related PGPs and PMI adherences relationships (weak PMI adherence to strong information PGP adherence) whilst, LIP 4 show medium to strong relationship for adherence to PMI common practice and information PGP which is positive but not strong. Thus, four out of the six LIPs studied show positive relationship between information related PGPs and PMI common practices while the other two doesn't. This suggests that the relationship between adherence to PGP information and adherence to PMI common practice is positive and the strength of the indication is strong based on the data available to this research.

### **Information PGP relationship with LIP performance planning stage common practices**

LIPs 1, 2, 3, 5 and 6 all show a strong indication of a positive relationship between information related PGPs and PMP common practices in terms of weak to weak or strong to strong corresponding relationships. LIP 4 on the other hand show weak link in its information related PGPs and PMP adherences relationships. Thus, five out of the six LIP studied show a strong indication of a positive relationship between information related PGPs and

PMP common practices while one doesn't. This suggests that the relationship between adherence to PGPs related to information and adherence to PMP common practice is strong and positively associated.

#### **Information PGP relationship with LIP performance executing and controlling stage common practices**

LIPs 1, 2, 4 and 5 all show a strong indication of a positive relationship between information related PGPs and PMP common practices in terms of weak to weak or strong to strong. LIP 3 and 6 on the other hand show medium relationship in their information related PGPs and PME adherences relationships. Thus, four out of the six LIP studied show a strong indication of a positive relationship between information related PGPs and PME common practices while the other two shows a positive but medium relationship. This suggests that the relationship between adherence to PGP information and adherence to PME common practice is positive based on the data available to this research. The strength of this indication is strong due to the majority of the LIPs showing a strong indication of a positive relationship.

#### **Information PGP relationship with LIP performance closing stage common practices**

LIPs 2, 3, 4, 5 and 6 all show a strong indication of a positive relationship between information related PGPs and PMC common practices in terms of weak to weak or strong to strong. LIP 1 on the other hand shows weak in its information related PGPs and PMC adherences relationships. Thus, five out of the six LIP studied show a strong indication of a positive relationship between information related PGPs and PMC common practices while one doesn't. This suggests that the relationship between adherence to PGP information and adherence to PMC common practice is positive and strong.

#### 7.2.2.4 What is the relationship between adhering to PG principles and impacts caused by Political, Economic, Social and Technological adverse influences?

The PEST analysis done on the LIPs with respect to their adherence to PGPs in chapter six showed the following results:

- **Political:** Adherence to PGPs has a positive relationship with low adverse impact of political factors. LIPs with poor adherence to PGPs also had strong levels of political interference (domination of all project decision-making by a few stakeholders) on project decisions and poor compliance to government policies, while LIPs with minimal political interference had strong adherence to PGPs. Thus political influences have adverse impact on adherence to PGPs.
- **Economic:** Adherence to PGPs has a positive relationship with low adverse impact of economic factors such as; inflation, supply chain and exchange rate, unavailability of materials, equipment and resources and poor civil infrastructure. However, the LIPs that performed excellently and adhered strongly to most PGPs were able to overcome the impact of the adverse economic situation in Nigeria. Therefore, there is a strong indication that adherence to PGPs can help reduce the impact of adverse economic situations surrounding the implementation of LIPs in Nigeria.
- **Social-cultural:** LIPs with strong adherence to PGPs also showed low adverse impact of socio-cultural factors; autocracy, high anxiety leading to hurriedness, masculinity, segregation and high power distance index; and vice versa. Therefore, there is a strong indication that reducing the impact of adverse social cultural influence is key to promoting adherence to PGPs in Nigeria
- **Technological:** Adherence to PGPs has a positive relationship with low adverse impact of technological factors. Therefore,

there is a strong indication that adherence to PGPs can help reduce the impact of adverse technological situations surrounding the implementation of LIPs in Nigeria.

### 7.2.3 Summary of answer to the research question

Following the results from the evaluation steps in this chapter it can be concluded that:

1. There is a strong indication that adherence to PGPs; especially the structure and information related PGPs; is positively associated with the performance of LIPs in meeting their original estimations/specifications in Nigeria.
2. Also there is a strong indication that adherence to all PGPs; structure, people and information related PGPs; has a positive relationship with the adherence to PM common practices in Nigeria.
3. Furthermore, there is a strong indication that adherence to PGPs; structure, people and information related PGPs; has an inverse relationship with the level of adverse impact LIPs experience from external factors such as political, economic, socio-cultural and technological factors. This implies that the stronger the adherence to PGPs the lesser the adverse impact that is experienced from these external factors.

Finally, from these conclusions, it can be seen that adherence to PGPs helped to improve the outcome of LIPs in Nigeria except when the adverse political, socio-cultural, economic and technological situations are not controlled.

Therefore, the conclusion is that, adherence to PGPs can improve the performance of LIPs implemented in Nigeria, if the impact of adverse political, socio-cultural, economic and technological issues is controlled during the lifecycle of LIPs.

## **7.3 Research limitations**

### **7.3.1 Sample appraisal**

The sample focus of this research is developing economies. Nigeria was selected as the single example of a developing economy as it shows all the characteristics of a developing economy. Though it may not be identical to all developing economies but has an economy that is currently depending on infrastructures to reach its full potential. As well as being Africa's largest economy as and the most populous country in Africa, Nigeria is also rich in natural resources. These qualities has made Nigeria an interest to investors but the poor state of infrastructures; such as road networks, bridges, electricity infrastructures etc.; has made it difficult for the country to attract all the investors that it could.

Several LIPs have been initiated in Nigeria over the last two decades to help boost the economy by attracting investors but some have been poorly completed and others are abandoned mid-way through it. This raises the question about the causes of this phenomenon. Hence the perception that Nigeria is among the developing economies that have the worst performing LIPs. Therefore, Nigeria serves as a good example of a developing economy were LIPs have performed poorly.

However, the findings of this may not be generalizable to all developing economies as Nigeria is not common example of a developing economy. Nigeria has several unique qualities that make her circumstances not easily replicable in most developing economies.

The number of LIPs studied is six, which is only a small fraction of the number of LIPs implemented in Nigeria. Thus, as well as this sample haven taken five different LIP types; telecommunication, housing, water, electrification and transportation; representing wide range of LIP types, it has only studied one out of many cases. This implies that the sample may not be

a complete representation of all that happens in implementing LIPs in Nigeria but an insight.

The choice of senior participants in the LIPs for the survey was in order to ensure the respondents have good knowledge of PG activities in the LIPs, as adherence to PG was the main focus of this study. However, more junior participants in the LIPs could have possibly provided more information about the PM common practices, hence providing more insight to the strength of the relationships between PGP adherences and PM common practices adherence.

### 7.3.2 Methodology appraisal

This sub-section will presents an appraisal of the methodology by identifying things that went well and others that could have been better in this research.

#### **What could be improved?**

Data Collection: Due to time restriction, the data sample was limited to senior management to ensure that reliable data is collected. However, the inclusion of junior staff involved in the LIPs could have possibly provided more insight on some of the aspects of the research findings that were not conclusive.

Also, to make the research more generalizable, it would have been useful to investigate more LIPs or even investigate LIPs from one or two more developing economies. The limitation to six LIPs in Nigeria means that though the findings is reliable and accurate but it may not be generalizable to all other developing economies or else further research is carried out.

## **7.4 Contribution of the research**

### **7.4.1 Contribution to the field of project management and governance especially in developing economies**

This research contributes to knowledge in the field of project integration management and governance in two main ways. First is the identification of the strong indication of a positive relationship between the structure and information related PG principles and the performance of LIPs in meeting their original estimations. LIPs 2 and 5 showed strong adherence to PG principles relating to structure of the governance body and information disclosure both performed “excellently”; in the context of the research metrics; in meeting their original cost, duration and scope estimations. LIP 2 and 5 also experienced consistent minor adverse influence from political, economic and social and technological factors that exist in the Nigeria society whereas the rest of the studied LIPs did not show such consistency. This suggests a relationship between these factors and the adherence to the PG structure and information related principles. Therefore, this knowledge contributes to the understanding of the impact that strongly adhering to PG principles relating to the governance structure and information can have on the performance of a LIP implemented in developing economies.

Adherence to PGPs have also shown positive and strong indication of a positive relationships with adherence to PM common practices as well as the performance of LIPs in meeting their original estimation. These findings have provided more understanding about the causes of the poor performance of LIPs implemented in developing economies (Nigeria), in meeting their original estimations. Furthermore, the findings also provides a better understanding of why some LIPs perform better than others regardless of being surrounded by the same Nigerian political, economic, social and technological environment.

Finally, the existing literature on project governance and management has not examined the impact of adhering or not adhering to PG principles has on the adherence to PM common practices, LIPs meeting original estimations



and LIPs reducing the impact of external project factors such as political, economic, social and technological factors in developing economies, hence, the findings of this research contribute to knowledge in the project management and governance field.

The study concludes that, adherence to PGPs can improve the performance of LIPs implemented in Nigeria, if the impact of adverse political, socio-cultural, economic and technological issues is controlled during the lifecycle of LIPs.

## **7.5 Recommendations and future study**

### **7.5.1 Respondents' recommendations appraisal**

The following recommendations made by the respondents' for improving the adherence to PGP and the performance of LIPs in meeting their original estimations will be appraised to see how they can contribute to an improved performance in LIP:

#### **For improving the adherence to PGP and outcomes of LIPs**

1. Evidences from the research data suggest that there is no measures put in place to ensure funding for LIPs are secured before they are approved, which is linked to politics rather than lack of adequate policy. Thus, Conscious effort should be made to reduce the impact of politics of domination and subordination to allow for better compliance to policies in LIPs in Nigeria (proposition by researcher, from the impact politics on adherence to PGPs).
2. Use of a stronger legal system to ensure contractual agreement between contractors and project owners are respected; thus, at the same time giving the PG steering committee stronger authority (proposed by; five project contractors and six project contractors organisations interviewed).
  - This will make owners and contractors show more respect for the agreements they have reached at the beginning of the LIP such as payment agreements, information disclosure and PGP related agreements. Thus non-adherence to PGP subsequently will reduce.
3. Conscious effort should be made to reduce the impact of Nigeria cultural dimensions such as; high masculinity, individuality, high power distance and high uncertainty avoidance. This will increase adherence to project governance principles and improve outcome of LIPs (proposition by researcher, from the impact politics on adherence to PGPs)

4. Measures should be put in place to ensure funding for LIPs are secured before they are approved
5. Thorough stakeholders' identification and ranking at the beginning of the project (proposed by; five interviewed project consultants).
  - This will ensure the steering committees are set up and constituted with the right people who will be able to ensure the structure and information related PGP are adhered to.
6. Government LIP awarding policies in the entire country restricting the use of non-accredited companies and non-professionals in carrying-out highly technical roles in LIP such as Project manager, project supervision, contractor, project director and consulting (proposed by; Permanent secretary of utilities ministry during his interview).
  - This will make the work of PG steering groups more effective by improving the level of disclosure of information from the LIP team.

#### 7.5.2 Researchers recommendations and appraisal

##### **For improving the general performance of LIPs in meeting their original estimations**

1. Planning should be allowed more time and more IT resources should be used regularly.
  - This will ensure that total and free access to LIP information by all project participants at the appropriate levels. Also allowing more time for planning all through the project will allow for better feasibility study, risk management, stakeholder management, and control and monitoring of the project implementation.
2. Project sponsors/owners should have the full funding for their proposed LIPs before initiating it or get the banks to sponsor the LIPs and repay them by instalment or make use of Public-private-partnerships.
  - This will ensure that the payment delays due to lack of funding are eliminated.

3. Clear project goals and deliverables.

- This will ensure that the project duration and scope are adequately planned as well as the budgeted

### 7.5.3 Future study

This research has investigated the level of adherence to PGP in developing economies, the relationship between the adherence to PGP and adherence to PM common practices, performance of LIPs in meeting their original estimations.

The findings indicate that adherence to this PGP has a positive impact on the outcomes of LIPs in Nigeria. It also indicates that adherence to this PGP is strongly dependent on how much political, economic, socio-cultural and technological factors are controlled.

However, the findings also indicate that there are still a few questions about the strength of some of the relationships; especially, the relationship between adherence to people relating PGP and performance of LIPs in meeting their original estimation. Thus, future researchers could further examine the strength of some of the relationships identified in this study using different samples from the developing economies list.

This research has limitation to its sample; being only six LIPs from Nigeria; and may not be generalizable to every LIP implemented in developing economies. Therefore, future researchers could repeat the study in other developing economies to confirm the relationships identified in this study.

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## **APPENDIX**

### **Appendix 1: List of respondents**

#### **LIP1 - Imo water project (State sponsored)**

Owner – Commissioner in Imo state

Contractor – Project Manager AE & E Construction

Consultant - Project Managers Ministry of Works and transport (3) (Electrical, Building & Transport)

Beneficiary - The GM Imo State Water Board (Utility)

#### **LIP2 – MTN/GLO Wireless network (PPP)**

Owner - MTN RTO (Telecom and Electrical)

Contractor - PM JMG (Electrical)

Consultant - Project Director Huaxin Consulting (Telecom), Wireless Network Manager Huawei (Telecom)

Beneficiary - MTN FSE (Electrical), Field Service Manager Globacom (Telecom)

#### **LIP3 – Nigerian Traditional Rulers council Building (FG)**

Owner – Director Federal Ministry of internal affairs

Contractor - MMEC Abuja (Building)

Consultant - The Earth Consultants (Building)

Beneficiary - Traditional ruler

#### **LIP4 – NDDC Road (FG)**

Owner - NDDC Project Manager (Electrical, Building & Transport)

Contractor - MD Hawana Constructions (Transport)

Consultant - Project Managers Ministry of Public Utilities (Electrical & Transport)

Beneficiary - Project Managers Ministry of Works and transport (Electrical, Building & Transport)

**LIP5 PTDF Road (FG)**

Owner - Deputy Chief Officer on projects PTDF (Transport, Utilities and Building)

Contractor –Project manager Julius Berger Nig

Consultant - Building Inspection Office FCDA Development Control (Building

Beneficiary - Assistant Director City Infrastructure FCDA (Transport, Utilities and Building)

**LIP6 – PH Rural electrification (State + FG)**

Owner - Permanent Secretary Ministry of Public Utilities (Electrical, Building & Transport)

Contractor - PM Lexita Nig Ltd (Electrical)

Consultant - Project Managers Ministry of Works and transport (Electrical, Building & Transport)

Beneficiary – Deputy director of works

**List of LIP documents obtained**

Compendium Report on ROAD INFRASTRUCTURE & RELATED DEVELOPMENT IN NIGERIA: 2013

Abandoned, Incomplete and Substandard Infrastructure projects sponsored by Federal, State, and Local Governments; Oil Companies and International Organizations in Nigeria since 2000; Part of the Citizen Report Card on Public Services, Good Governance and Development from 120 Niger Delta Communities

Annual summary report by African Development Bank Group

PROCUREMENT PROCEDURES MANUAL For PUBLIC PROJECTS In NIGERIA

Project plans for five of the studied LIPs

## Appendix 2: Introduction letter and research brief

### **The Research Study**

I am a researcher at the school of management in the university of Bradford, United Kingdom. We are conducting a case study research on identifying the impact of adhering to project governance principles on the performance of large infrastructure projects in developing economies; with Nigeria as example. Following the Reputation of your organization for excellence in management of projects, we would like to use you as one of our case studies. This research is strictly for academic purposes. The findings of this research can be sent to your organization at request.

### **Your Involvement**

We would like to interview the management staff of your organization who have been involved in a large infrastructure project worth over N500 million about their experiences and views of how project governance principles correlates with the project performance. The interview will take about an hour minutes. All the information that we collect about you during the course of the research will be kept strictly confidential and only the researcher will have access to your information. You will not be able to be identified in any reports or publications.

The audio recordings made during this research will be used only for analysis and for illustration in any future publications. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings.

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will contribute to knowledge about how to manage project risks in Nigeria project management sector.

The interviews would be ideally conducted between 15<sup>th</sup> of August and 30<sup>th</sup> of September but you may advice me on dates that are suitable for you.



Thank you for taking the time to consider this research project.

If you would like to discuss the research further or have any questions please do not hesitate to contact us.

Yours Sincerely,

**Anthony Njoku**

Researcher and Associate Tutor in Operations and Research Methods

School of management,

University of Bradford, Bradford

Emm

Lane,

Bradford

West Yorkshire, BD9 4JL

*Tel: +44(0)7429491759*

*E-mail: [ainjoku@bradford.ac.uk](mailto:ainjoku@bradford.ac.uk)*

By signing this letter, I give free and informed consent to participate in this research study.

Participa

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Please check this box and provide your e-mail below if you would like to receive the study's findings. E-mail

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## PhD Research Proposal

EVALUATION OF THE IMPACT OF ADHERENCE TO  
PROJECT GOVERNANCE PRINCIPLES  
ON THE OUTCOME OF LARGE INFRASTRUCTURE PROJECTS  
IMPLEMENTED IN DEVELOPING ECONOMIES:  
WITH NIGERIA AS AN EXAMPLE

By

Anthony Iroegbu Njoku

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### Introduction

This research proposal is motivated by the desire to find a solution to the pitiful state of LIPs implemented in most developing countries. It is written in support of my PhD application to carry out a research in the University of Bradford School of management. The proposal has been developed in discussion with Kevin Barber and review of several literatures relating to my area of research interest.

### Aims of the research

This research aims to contribute to knowledge in the area of project management and governance by identifying the relationship(s) between adherences of LIP in developing economies to project governance principles and their performance in terms of following the good project management practices as well as delivering the project to expectations and agreed plan. This knowledge will provide an insight on whether project governance can be used to improve the performance of LIPs in developing economies and if so, identify which project governance principles that are critical to improving LIP performance. Nigeria will be used as the case study in this research.

## Research questions

This research will seek to answer the following question:

4. Does adherence to project governance principles have an impact on the outcome of LIPs implemented in developing economies?

The research question will be answered by implementing the following steps:

1. Identifying to what level LIPs implemented in developing economies adhere to PG principles
2. Identifying the relationship between adhering to PG principles and performance of LIPs in developing countries
3. Identifying the relationship between adhering to PG principles and adherence to PM common practices
4. Identifying the relationship between adherence to PG principles and impact of adverse political, economic, social and technical influences on the LIPs
5. Evaluate if there are indications showing that the adherence to PG principles have an impact on the outcome of LIPs implemented in developing economies

## Review of relevant literature

This research is investigating the critical cause of the high level of poor performances in LIP. The review of relevant literature on this shows that the poor performances of LIPs have not improved regardless of efforts to develop new techniques to tackle it (Flyvbjerg, 2005b). However, the underlying factor(s) that contributes the most to this situation has not been verified as numerous authors offer different points of view on this. Several techniques; such as the critical path analysis, critical chain project management, Program Evaluation Review Techniques PRINCE2, Six Sigma, Stage-gate models etc; have been developed over the years that should help in resolving the issue of LIPs not meeting their original specifications (Al-Momani 2000; Chan et al, 1997; Aibinu et al, 2002; Arditi et al, 1985; Cusworth et al, 1993; Dlakwa et al, 1990; Flyvbjerg et al, 2003; Flyvbjerg et al, 2002 and Flyvbjerg 2005a). However, Flyvbjerg (2005a), suggest that the

level of poor performance has not reduced. Thus, it is questionable why the several techniques and solutions and techniques are not yielding results in terms of LIP performance. It could be attributed to a possibility that the numerous techniques and solutions not working or that a fundamental problem is being overlooked because poor performance; such as overruns; in cost are beneficial to some. However, it is arguable that researchers have been totally incapable of identifying how to make these techniques yield better results over these past years (Bekker et al, 2008). Thus, one is left to think that a possible approach that can tackle the issues of poor performances of LIP may have been ignored intentionally.

Furthermore, reports by Flyvbjerg (2003), Flyvbjerg et al (2002), Flyvbjerg, (2005a), suggest that cost and time overruns amongst other issues in LIP has been persistent regardless of numerous project management techniques that have been developed over the past long history of project management. Flyvbjerg (2003) stated that 9 out of 10 projects have cost overrun. He found out that there were overruns in the 20 nations and 5 continents covered by his study. Thus, overruns appear to be a long lasting globally spread issue. Flyvbjerg (2003) proposes that cost overrun has not decreased over the past 70 years. Does this mean that no learning have taken place? Or that project promoters and forecasters have learned what there is to learn, namely that cost overrun pays off; cost overrun is a simple consequence of cost underestimation and underestimation is used tactically to get projects approved and built?

However, the growing perception that the performance of LIPs in developing economies is worse than in developed economies. This can be seen in the extremely long time overruns of three years and over often resulting in total abandonment of projects - seen in LIP in Nigeria. An alarming figure of 11,886 LIP are yet to be completed over the past twenty years as reported by the Presidential Projects Assessment Committee (PPAC) set-up in March 2011, by President Goodluck Jonathan of Nigeria to look into cases of abandoned Federal Government projects. These projects range from steel plant development projects to construction of roads (PPAC, 2011).

These lengthy overruns has been mainly attributed to inadequate planning and financing of the project cycle which results in delaying in payment, wrong estimation, faulty design, influences on decision-making process, use of ineffective project management techniques, poor supply chain and civic infrastructure, etc. Aibinu et al (2002) proposes that inadequate planning is the root cause of lengthy cost overruns, time overruns and abandonment of LIP in Nigeria. This notion was supported by the research works of Aibinu et al (2002), Frimpong et al (2003), Sonuga et al (2002), Zou et al (2007),Luu et al (2008) and Assaf et al (2006).

On the other hand, reports by Al-Momani (2000), Nguyen et al (2004), Ogunlana et al (1996) and Muriithi et al (2002) suggest that the use of inappropriate project management techniques is root cause of poor performance of LIP. These reports argue that an assumption of economic stability by the developers of most project management techniques overlooks the fact that most developing economies have not yet attained this economic stability; thus, these techniques should not function properly in developing economies.

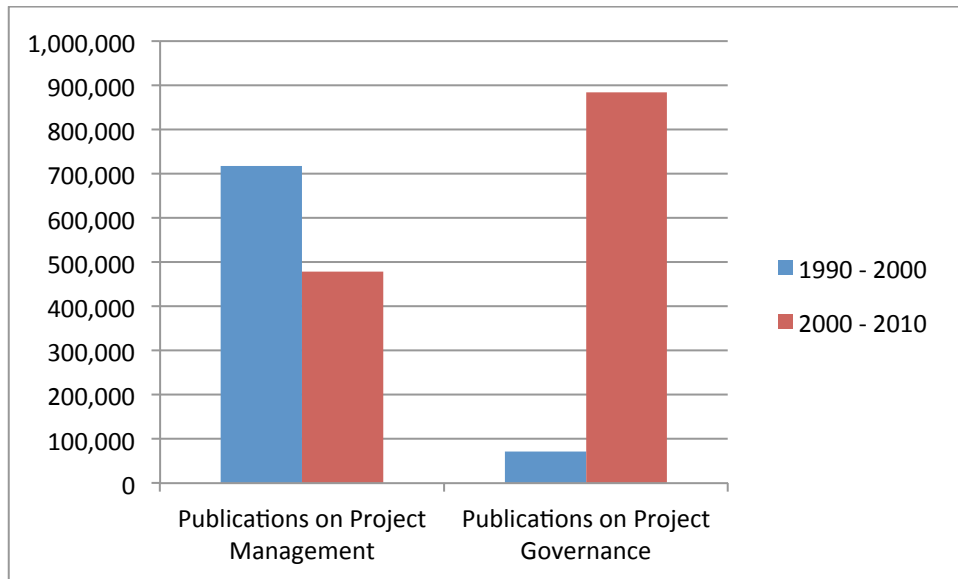
Several other arguments have been made on the root cause of the high rate and level of poor performance of LIPs in developing economies but one aspect that have been overlooked is that it should be the responsibility of some people involved in the project; such as sponsors and stakeholders to ensure that the planning process, choice of project management techniques, financial arrangement etc is adequate; this role can be considered as governance of the project. This hints that the critical cause of the poor performances may well be a related to a lack of governance. The projects seem to need better level of directing in order to ensure it following the right set of project management techniques, develop an adequate plan or make adequate financial arrangement.

However, Bekker et al (2008) suggest that introducing governance to the management of project may be the way forward in providing better monitoring, accountability, responsibility and clarity. He argues that in the 1980s the introduction of corporate governance to the management of

activities in the corporate world was successful in resolving the issues of poor management that existed then.

*“Corporate governance provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.”*  
(OECD) 2004

Project Governance (PG) is a guide that provides principles of corporate governance for the management of projects with due consideration made of the temporary and unique nature of projects. A further review of relevant literature suggest that most of the issues affecting the performance of LIP in general and in developing economies in particular are more effectively addressed by PG than any of the existing project management solutions and techniques (Liu et al, 2005). Moreover, more academic work has been directed towards project governance in the last decade when compared to previous years; refer to figure 1.1. The concept is relatively new compared to project management (Liu et al, 2005) but search on the web using the Google scholar search engine show rapidly growing publications on project governance from 71,200 between years 1990 and 2000 to 884,000 between 2000 and 2010. On the other hand publications in project management saw a large drop from 718,000 between years 1990 and 2000 to 479,000 between years 2000 and 2010 (Liu et al, 2005); see figure 1.1 below. This trend suggests a change in focus from project management as a way of delivering successful project and an increase in focus on project governance. This change could be as a result of the fact that research into project management approach has been extensively researched but project issues still persisting.



**Figure 1.1:** Search result of publications on project governance vs publications on project management (2 September 2011)

This new focus on PG as a possible way to improve the level of poor performance seen in LIP has guided this research towards investigating if lack of governance is the most critical factor that causes the poor performance LIPs in developing economies.

### Summary of Methodology

The following choices of different research methodology options were made based on the nature of the study, the access to data, the resource limitations of research and the best fit for research focus.

1. Research strategy = case study survey
2. Research approach = deductive
3. Research Method = Mixed method (qualitative and quantitative)
4. Research Philosophy = positivist
5. Time horizon = Cross sectional
6. Data collection = interviews and questionnaire/template
7. Data analysis = data driven mapping

### Research focus

The scope of this study has been defined by the research aim and questions. Thus, evaluating the adherence to PG principles, adherence to PM common practices and performance of LIPs in meeting original estimations in Nigeria



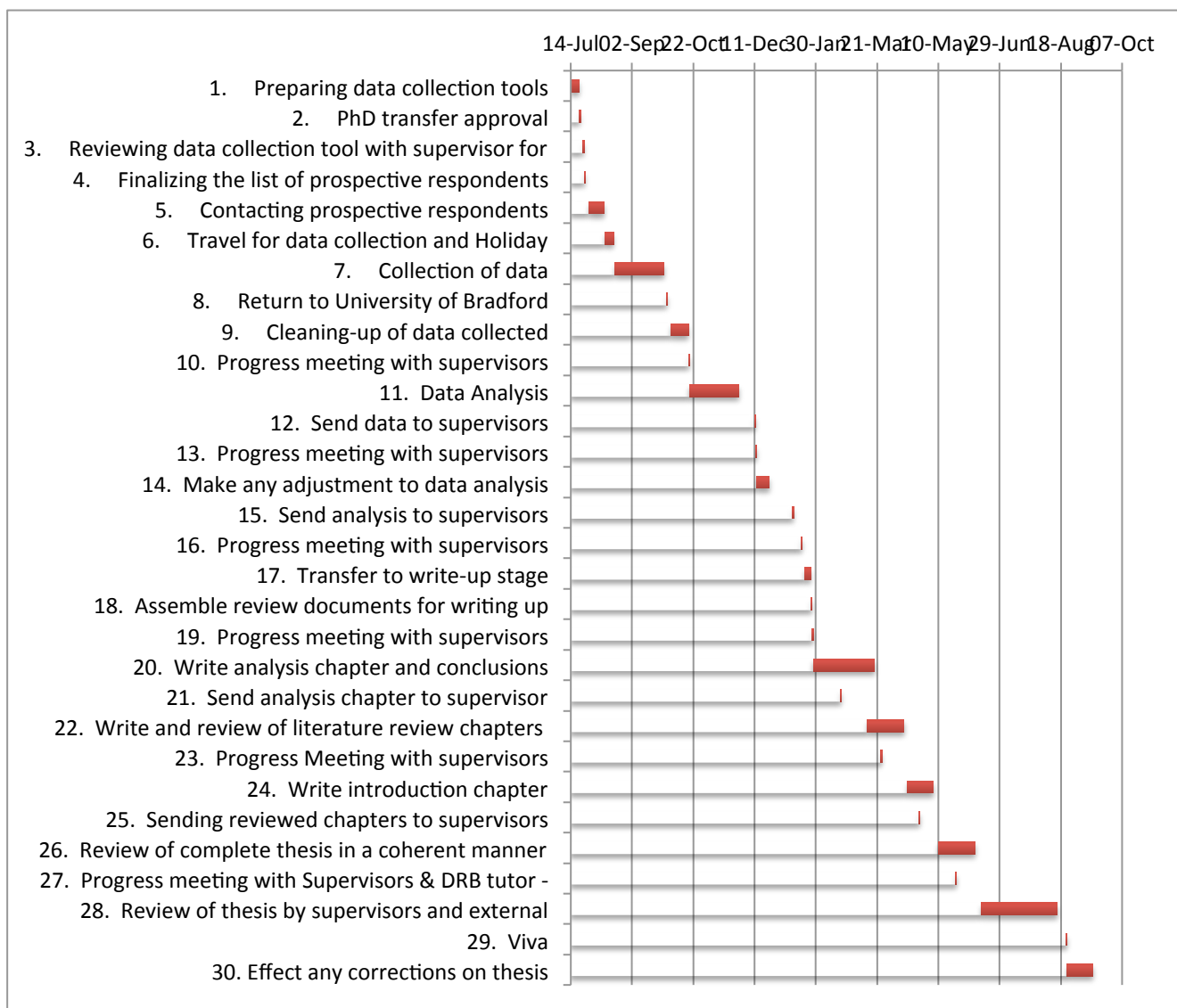
will be the focus of this study. This research will only study LIPs implemented in Nigeria. Nigeria has been chosen for case study in this research as there will be an easier access to data because contact with people in project management sector of Nigeria has been established after the initial discussion group and pilot survey.

Also, developing economies are mainly defined by the relationship between a country's level of industrialization and her population. Nigeria is the most populous country in Africa with a population of over 150 million people (see table 1.1). However, Nigeria has a very low level of industrialization with very insufficient electricity to support her large population and the few industries in the country (CBN, 2006). The United Nations in her Human Development Index (HDI) has provided a gauge for measuring a country's level of development. The level of development is measured using statistical indexes like Per Capital (PC), life expectancy, Gross Domestic Product (GDP) etc. Table 1.1 shows that Nigeria has low GDP per capita and life expectancy figures; relative to her population; alongside other developing economies. This indicates that Nigeria is a typical developing economy. The literacy level and life expectancy is one of the lowest in the world, which falls within the defining criteria for a developing economy; also making Nigeria a good example of a developing economy. Nevertheless, as much as the circumstances that apply in Nigeria in terms of development should be similar to most developing economies, it does not mean that the circumstances in Nigeria are identical to all other developing economies. Therefore, the findings from the Nigeria case study may not be generalised completely for all other developing economies but should serve as a guide to what is obtainable in a developing economy. See table 1.1 for more details.

## Planned timetable

### Gantt chart from transfer to PhD till end of PhD

Tasks	Column n1 Duration in Days	Column n2 Start date	Column n3 End date
1. Finalizing key data and analysis needed for research aim	10	21-Aug	31-Aug
2. Preparing interview script	7	1-Sep	8-Sep
3. Reviewing data collection tool	1	10-Sep	11-Sep
4. Progress meeting with supervisors	1	12-Sep	13-Sep
5. Contacting of prospective respondents	21	10-Sep	01-Oct
6. Travel for data collection and Holiday	15	03-Oct	18-Oct
7. Collection of data	60	19-Oct	20-Dec
8. Break	11	23-Dec	03-Jan 2014
9. Cleaning-up of data collected	14	04-Jan	18-Jan
10. Progress meeting with supervisors	1	18-Jan	18-Jan
11. Data Analysis	60	19-Jan	10-Feb
12. Review of data by supervisors	7	10-Feb	17-Feb
13. Progress meeting with supervisors	1	17-Feb	17-Feb
14. Make any adjustment to data analysis	10	18-Feb	28-Feb
15. Review of analysis by supervisors	10	28-Feb	18-Mar
16. Progress meeting with supervisors	1	18-Mar	18-Mar
17. <b>Transfer to write-up stage</b>	<b>5</b>	<b>19-Mar</b>	<b>05-Apr</b>
18. Assemble review documents for writing up	1	06-Apr	06-Apr
19. Progress meeting with supervisors	1	07-Apr	07-Apr
20. Write analysis chapter and conclusions	50	08-Apr	28-May
21. Review of analysis chapter by supervisor	25	29-May	23-June
22. Review of literature review chapters	30	23-Jun	23-Jul
23. Progress Meeting with supervisors	1	24-Jul	24-Jul
24. Write introduction chapter	21	25-Jul	15-Aug
25. Sending reviewed chapters to supervisors	1	17-Aug	17-Aug
26. Review of complete thesis in a coherent manner	30	18-Aug	18-Sep
27. Meeting with Supervisors & DRB tutor	<b>1</b>	<b>23-Sep</b>	<b>24-Sep</b>
28. Review of thesis by supervisors and external examiners	90	24-Sep	24-Dec
29. <b>Viva</b>	<b>1</b>	<b>27-Dec</b>	<b>27-Dec</b> 2015
30. Effect any corrections on thesis	60	03-Jan	03-Mar
31. <b>Graduation</b>	<b>1</b>	<b>July</b>	<b>July</b>



## Appendix 4: data collection tools

### Stage one - pre-interview template

Dear Sir/Madam,

I am Anthony Njoku and I am conducting a research titled 'evaluation of the impact of adherence to project governance principles on the outcome of large infrastructure projects Implemented in developing economies: With Nigeria as an example' in which the relationship between adherence to project management common practices and adherence to project governance is being studied. This is in fulfillment of my PhD degree in the area of project management. I would appreciate your ANONYMOUS responses, which will not take more than 10 minutes and will be treated with confidentiality. Thank you.

Please answer the following questions to the best of your ability, by marking the appropriate box of your answer choice with a tick.

Project stages	Survey Statements	Number of Selections		
		YES	NO	Unaware
<b>Initiation</b>	<b>PM Practices</b>			
	Expectations were clearly defined			
	Scope and resource were estimated adequately			
	Choice of project was justified			
<b>Planning</b>	Feasibility study was conducted			
	· Project scope was properly planned			
	· Project scope was properly defined			
	· Project activity was properly defined			
	· Project activity sequencing was properly sequenced			
	· Project resource planning was properly defined			
	· Project activity duration was properly estimated			

	· Project schedule development was properly defined			
	· Project cost was properly estimated			
	· Project cost budget was properly defined			
	· Project plan development was clearly defined			
	· Project quality planning was done properly			
	· Project communications planning was done properly			
	· Project risk were clearly identified			
	· Project risk was clearly quantified			
	· Project risk response was developed			
	· Organisational Planning was done properly			
	· Staff Acquisition was conducted on time where necessary			
	· Procurement Planning was done properly			
	· Solicitation Planning was properly done			
<b>Executing and Controlling</b>	· Information was distributed often to all according to agreement			
	· Team development activity took place			
	· Quality assurance was properly conducted to plan			
	· Scope was verified regularly			
	· Solicitation was done when needed			
	· Source selection was adequate			
	· Contract administration was properly managed			
	· Performance Reporting was according to plan			
	· Overall Change Control was to plan			
	· Scope change was properly controlled			

	· Schedule Control were in place and were applied			
	· Cost was properly controlled			
	· Quality was properly controlled			
	· Risk response was properly controlled			
<b>Closing</b>	· Contract close-out was done at end of project			
	· Administrative Closure was done at end of project			

## Stage two – semi-structured interview

### Question 1: On PGP1

**Main:** Who has/had the overall responsibility for directing or governing the project?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Project Terms of Reference Approved (Objective and Scope);
- Project Structure Agreed;
- Project Sponsor Appointed;
- Project Governance Team Chairperson Appointed;
- Project Management Team Approved;
- Project Manager Appointed;
- Project Management Manual Approved;
- Project's Delegation of Authority (Authorisation Matrix) Approved;
- Code of Ethics and Fraud Prevention Policies Approved;
- Project Plan (Timeline and Major Milestones) Approved;
- Project Budget Approved;
- Project Key Performance Indicators Agreed;
- Project Governance Reporting and Submission Timeline Agreed;
- Executive management must be actively involved from start to closure of project lifecycle

- Project Governance Team Meeting Schedule Agreed;
- Tender / Procurement Procedures for Consultants / Suppliers Agreed;

### **Question 2: On PGP2**

**Main:** What were the roles, responsibility and performance criteria of you and your colleagues in the directing or governance of the project? How was this communicated to you?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Monitor project progress against project plan and milestones;
- Training on teamwork skills was provided for project team at the start of the project
- Make high level project decisions;
- Determine strategic changes to project;
- Resolve key issues; and
- Monitor risks.
- Project Governance Team Membership Agreed;
- The day-to-day roles and responsibility of the members of the project team was reassigned to other staff
- Project team should understand and sign team charter before engaging in project

### **Question 3: On PGP3**

**Main:** What level of monitoring, control and directing applied throughout the project and how was this achieved?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Assess and approve transfer of project ownership from the project team to operations;
- Carry out a project completion review; and
- Assess realization of expected benefits

- Consultant / Supplier Contract Management Guidelines;
- Issue Resolution and Escalation Processes Setup;
- Risk Management System Setup;
- Detailed Risk Register;
- Crisis Management and Communication Plan Approved; and
- Project Change and Termination Policies and Processes Approved
- The project owner should champion the implementation process rather than the consultants, supplier or any other stakeholder

#### **Question 4: On PGP4**

**Main:** What was the relationship between the portfolio of this project and the strategic goal of this organisation?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Associated projects
- Determine expected results / benefits the project needs to achieve; and set risk register.
- Make strategic assessment;
- The organisational changes associated with the implementation of the project is taken into consideration by the executive management
- Risk on all aspects of project was identified, quantified and mitigated against across all phases of project

#### **Question 5: On PGP5**

**Main:** What was the approval process for the project stages and was there any review and authorisation points? If yes, how many were involved and were they recorded and communicated?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Assessed business case
- Approved project plan



- Appointed project governance team;
- Approved project plan, milestones and key performance indicators (KPIs) and (Key risk indicators) KRIs;
- Progress reports

#### **Question 6: On PGP6**

**Main:** Was the members of all delegated authorisation bodies represented when decisions on approval is made? If yes, did they have the competence, resources and authority to make appropriate decisions?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Set Project Charter and governance policies;
- Approve project management team.
- A full time project manager should be allocate to each project

#### **Question 7: On PGP7**

**Main:** Was there realistic information provided in support of the justification for the project at the approval point?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Set Project Charter and governance policies;
- Approve project plan, milestones and key performance indicators (KPIs) and (Key risk indicators) KRIs; and

#### **Question 8: On PGP8**

**Main:** Did the steering committee/board make the decision on when to scrutinize project and the management process? If yes how did they get this done?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Same as in PGP1

**Question 9: On PGP9**

**Main:** What was the project status, risk/issue escalation reporting criteria?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Reporting schedule agreed
- The project team was provided with a dedicated office/project environment to facilitate their commitment in the implementation of the project

**Question 10: On PGP10**

**Main:** Was a lesson learnt log documented for the project? If yes, is it to the disposal of other projects and how?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Reporting schedule agreed
- Team awareness of project decisions and progress
- Lesson learnt logs from previous related LIPs

**Question 11: On PGP11**

**Main:** What was the level of each project stakeholder's engagement with the project? And what were the criteria for this?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Stakeholders engagement
- Stakeholders agitation
- Stakeholders commitment
- Steering committee composition

## **Question 12: On PGP12**

**Main:** What would be the decision on the project if it were no longer justified as part of the portfolio and objective of this organisation? How will this be done?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Assess and approve transfer of project ownership from the project team to operations;
- Carry out a project completion review; and
- Assess realization of expected benefits.

## **Stage three – unstructured interview**

### **Question 1: On Performance and general practices during project lifecycle**

**Main:** How did the project progress in your view; starting from its inception, setting of deliverables and achieving them up until the closure of project? Also what was the original cost and time estimation and what was the actual duration and cost of the project?

**Further questioning:** they respondents were asked the further questions on the following areas when their responses do not address the question focus:

- Project actual cost
- Project original cost estimation
- Project actual duration Project original time estimation
- Project actual deliverables
- Project original set deliverables

## Appendix 5: Guide for different respondents

LIP 1 was a state government sponsored project which means that the project governance 'due process' policy of the federal government is not binding on them. The project owner organization respondent suggested that the state make use of traditional but "effective" project management methods. The impact of this is that, it is difficult for the project participant to adhere to PG principles when there are no policies implementing such principles. The lack of clearly defined policies for implementing all PG principles creates room for weak governance of project management practices. The PM common practices were not directly influenced by any political regulation but indirectly by the lack of a governance policy for managing projects in the state. Therefore there was no direct impact on PM practices by government policies or regulation. For the performance in meeting project cost, scope and duration, the state project and procurement had no regulations specifically guiding this process; which is a lack of governance policy rather than PM policy.

Looking back on the 15 years of democratic governance in Nigeria, the number of political, tribal and religious related crisis and division in the country seems to have increased than during the military governance period. The lack of a stable political environment has created a need for leaders to seek temporary and quick solutions; especially infrastructural due to poor infrastructural development in the country; to the electorate wellbeing in order to get re-elected. This approach to governance has led to poor strategic planning and rushed initiating and planning of projects. LIP 1 suffered from this situation hence, its lack of proper project plan and absence of good governance of the management practices. Thus, the presence of a PG policy in the project could have arguably provided a barrier between this political instability and the management of LIP 1.

LIP 2 is a private sector sponsored telecommunication infrastructure project. Government regulates the telecommunication sector. In this project, there were no indications of a direct influence from any government regulation on the adherence to PG or PM practices. LIP 2 was managed and governed by

the private sector sponsors who had their own methodologies clearly set for handling large-scale infrastructures.

LIP 3 is a federal government sponsored infrastructure project. It is bound within the government “due process” policy set for projects and procurement process. However, it did not adhere to much of the due process policy. This leaves one to question the root cause of that. The project was not compliant to the government strategy and tends to lack the support of the stakeholders. Therefore it is fair to say that there was no direct indications that it was influenced by government any policy or regulation.

LIP 4 is a federal government agency sponsored project. The agency is bound by the policies of the federal government on procurement and projects.

LIP 5 is a federal government sponsored project in the federal capital of Nigeria. The contractors are a well-established European organization who has a reputation for excellent delivery of large infrastructure project to high standards and to specifications and estimations. The project was bound by the federal government regulations and policies.

LIP 6 is a federal and state government partnership project. The policies of both levels of government influenced the project. Thus the project was bound to a combination of both projects.

## Appendix 6: Results of analysis

Adherence to PM practices in LIPs					Strong = 70% and over, Medium = 50% - 69%, Weak = 0% - 49%
LIPs	Initiating Stage	Planning Stage	Executing & Controlling Stage	Closing Stage	Performance in terms of adherence common practices (Strong, Medium, Weak)
1	None	P9	E3, E13	C1, C2	Initiating = Weak Planning = Weak E & C = Weak Closing = Strong
2	I3	P1, P2, P5, P6, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19	E1, E2, E3, E4, E6, E8, E10, E11, E12, E14	C1, C2	Initiating = Weak Planning = Strong E & C = Strong Closing = Strong
3	None	P9	E2, E4, E5, E6, E7, E9, E10, E11, E13, E14	None	Initiating = Weak Planning = Weak E & C = Medium Closing = Weak
4	I2, I3	P1, P2, P3, P4, P6, P7, P9, P12, P17	E2, E4, E5, E6, E7, E9, E10, E11, E12, E13, E14	C1, C2	Initiating = Medium Planning = Medium E & C = Strong Closing = Strong
5	I1, I2, I3, I4	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19	E1, E2, E3, E4, E5, E6, E7, E9, E10, E11, E12, E13, E14	C1, C2	Initiating = Strong Planning = Strong E & C = Strong Closing = Strong
6	I1	P1, P3, P4, P5, P8, P9, P10, P11, P12	E4, E5, E6, E7, E10, E11, E12, E13, E14	C1, C2	Initiating = Weak Planning = Medium E & C = Strong Closing = Strong

L I P	PG Structure	PG People	PG Info	PM I	PM P	PM E	PM C	Performance
1	Weak	Weak	Weak	Weak	Weak	Weak	Strong	Poor
2	Strong	Medium	Strong	Weak	Strong	Strong	Strong	Excellent
3	Weak	Medium	Weak	Weak	Weak	Medium	Weak	Abandoned
4	Weak	Weak	Strong	Medium	Medium	Strong	Strong	Satisfactory
5	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Excellent
6	Weak	Weak	Strong	Weak	Strong	Medium	Strong	Satisfactory

Project stages	Survey Options	Code	Number of Selections (out of 6 sources)			Result (Options selected by > 2 respondents)
	PM Practices		YES	NO	Unaware	Mode
Initiation	<b>Core:</b>					
	Expectations were clearly defined	I1	1	5	0	NO
	Scope and resource were estimated adequately	I2	0	6	0	NO
	Choice of project was justified	I3	0	6	0	NO
	<b>FACILITATING:</b>					
	Feasibility study was conducted	I4	0	6	0	NO
Planning	<b>CORE:</b>					
	Project scope was properly planned	P1	0	6	0	NO
	Project scope was properly defined	P2	0	6	0	NO
	Project activity was properly defined	P3	0	6	0	NO
	Project activity sequencing was properly sequenced	P4	0	6	0	NO

	· Project resource planning was properly defined	P5	1	5	0	NO
	· Project activity duration was properly estimated	P6	2	4	0	NO
	· Project schedule development was properly defined	P7	1	5	0	NO
	· Project cost was properly estimated	P8	2	4	0	NO
	· Project cost budget was properly defined	P9	5	1	0	YES
	· Project plan development was clearly defined	P10	0	6	0	NO
	<b>FACILITATING:</b>					
	· Project quality planning was done properly	P11	1	5	0	NO
	· Project communications planning was done properly	P12	0	6	0	NO
	· Project risk were clearly identified	P13	0	6	0	NO
	· Project risk was clearly quantified	P14	1	5	0	NO
	· Project risk response was developed	P15	1	5	0	NO
	· Organisational Planning was done properly	P16	1	5	0	NO
	· Staff Acquisition was conducted on time where necessary	P17	0	6	0	NO
	· Procurement Planning was done properly	P18	1	5	0	NO
	· Solicitation Planning was properly done	P19	0	6	0	NO
<b>Executing and Controlling</b>	<b>CORE:</b>					
	· Information was distributed often to all according to agreement	E1	0	6	0	NO
	· Team development	E2	0	6	0	NO



	activity took place					
	· Quality assurance was properly conducted to plan	E3	5	1	0	YES
	· Scope was verified regularly	E4	1	5	0	NO
	· Solicitation was done when needed	E5	2	4	0	NO
	· Source selection was adequate	E6	1	5	0	NO
	· Contract administration was properly managed	E7	0	6	0	NO
	· Performance Reporting was according to plan	E8	1	5	0	NO
	· Overall Change Control was to plan	E9	0	6	0	NO
	<b>FACILITATING:</b>					
	· Scope change was properly controlled	E10	0	6	0	NO
	· Schedule Control were in place and were applied	E11	0	6	0	NO
	· Cost was properly controlled	E12	2	4	0	NO
	· Quality was properly controlled	E13	6	0	0	YES
	· Risk response was properly controlled	E14	1	5	0	NO
<b>Closing</b>	· Contract close-out was done at end of project	C1	6	0	0	YES
	· Administrative Closure was done at end of project	C2	6	0	0	YES

## LIP 2

Project stages	Survey Options	Code	Number of Selections (out of 6 sources)			Result (Options selected by > 2 respondents)
	PM Practices		Yes	No	Unaware	Mode
Initiation	Core:					

Planning	Expectations were clearly defined	I1	5	1	0	YES
	Scope and resource were estimated adequately	I2	6	0	0	YES
	Choice of project was justified	I3	1	5	0	NO
	<b>Facilitating:</b>					
	Feasibility study was conducted	I4	4	2	0	YES
	<b>Core:</b>					
	· Project scope was properly planned	P1	6	0	0	YES
	· Project scope was properly defined	P2	6	0	0	YES
	· Project activity was properly defined	P3	0	6	0	NO
	· Project activity sequencing was properly sequenced	P4	0	6	0	NO
	· Project resource planning was properly defined	P5	5	1	0	YES
	· Project activity duration was properly estimated	P6	6	0	0	YES
	· Project schedule development was properly defined	P7	0	6	0	NO
	· Project cost was properly estimated	P8	6	0	0	YES
	· Project cost budget was properly defined	P9	6	0	0	YES
	· Project plan development was clearly defined	P10	6	0	0	YES
	<b>Facilitating:</b>					
	· Project quality planning was done properly	P11	6	0	0	YES
	· Project communications planning was done properly	P12	6	0	0	YES
	· Project risk were clearly identified	P13	6	0	0	YES
	· Project risk	P14	6	0	0	YES

	was clearly quantified					
	· Project risk response was developed	P15	6	0	0	YES
	· Organisational Planning was done properly	P16	6	0	0	YES
	· Staff Acquisition was conducted on time where necessary	P17	6	0	0	YES
	· Procurement Planning was done properly	P18	6	0	0	YES
	· Solicitation Planning was properly done	P19	6	0	0	YES
<b>Executing and Controlling</b>	<b>Core:</b>					
	· Information was distributed often to all according to agreement	E1	6	0	0	YES
	· Team development activity took place	E2	6	0	0	YES
	· Quality assurance was properly conducted to plan	E3	6	0	0	YES
	· Scope was verified regularly	E4	5	1	0	YES
	· Solicitation was done when needed	E5	2	4	0	NO
	· Source selection was adequate	E6	6	0	0	YES
	· Contract administration was properly managed	E7	2	4	0	NO
	· Performance Reporting was according to plan	E8	6	0	0	YES
	· Overall Change Control was to plan	E9	0	6		NO
	<b>Facilitating:</b>					
	· Scope change was properly controlled	E10	6	0	0	YES
	· Schedule Control were in place and were applied	E11	5	1	0	YES
	· Cost was properly controlled	E12	5	1	0	YES

	· Quality was properly controlled	E13	0	6	0	NO
	· Risk response was properly controlled	E14	6	0	0	YES
<b>Closing</b>	· Contract close-out was done at end of project	C1	6	0	0	YES
	· Administrative Closure was done at end of project	C2	6	0	0	YES

## LIP 3

Project stages	Survey Options	Code	Number of Selections (out of 5 sources)			Result (Options selected by > 2 respondents)
	<b>PM Practices</b>		<b>Yes</b>	<b>No</b>	<b>Unaware</b>	<b>Mode</b>
<b>Initiation</b>	<b>Core:</b>					
	Expectations were clearly defined	I1	0	5	0	NO
	Scope and resource were estimated adequately	I2	0	5	0	NO
	Choice of project was justified	I3	0	5	0	NO
	<b>0</b>					
	Feasibility study was conducted	I4	0	5	0	NO
<b>Planning</b>	<b>Core:</b>					
	· Project scope was properly planned	P1	0	5	0	NO
	· Project scope was properly defined	P2	0	5	0	NO
	· Project activity was properly defined	P3	0	5	0	NO
	· Project activity sequencing was properly sequenced	P4	0	5	0	NO
	· Project resource planning was properly defined	P5	0	5	0	NO
	· Project activity duration was properly estimated	P6	0	5	0	NO

	· Project schedule development was properly defined	P7	0	5	0	NO
	· Project cost was properly estimated	P8	0	5	0	NO
	· Project cost budget was properly defined	P9	4	1	0	YES
	· Project plan development was clearly defined	P10	0	5	0	NO
	· Project quality planning was done properly	P11	0	5	0	NO
	· Project communications planning was done properly	P12	0	5	0	NO
	· Project risk were clearly identified	P13	0	5	0	NO
	· Project risk was clearly quantified	P14	0	5	0	NO
	· Project risk response was developed	P15	0	5	0	NO
	· Organisational Planning was done properly	P16	0	5	0	NO
	· Staff Acquisition was conducted on time where necessary	P17	0	5	0	NO
	· Procurement Planning was done properly	P18	0	5	0	NO
	· Solicitation Planning was properly done	P19	0	5	0	NO
<b>Executing and Controlling</b>	<b>Core:</b>					
	· Information was distributed often to all according to agreement	E1	4	1	0	YES
	· Team development activity took place	E2	3	2	0	YES
	· Quality assurance was properly conducted to plan	E3	0	5	0	NO
	· Scope was verified regularly	E4	4	1	0	YES

	· Solicitation was done when needed	E5	4	1	0	YES
	· Source selection was adequate	E6	5	0	0	YES
	· Contract administration was properly managed	E7	4	1	0	YES
	· Performance Reporting was according to plan	E8	2	3	0	NO
	· Overall Change Control was to plan	E9	4	1	0	YES
	<b>Facilitating:</b>					
	· Scope change was properly controlled	E10	5	0	0	YES
	· Schedule Control were in place and were applied	E11	5	0	0	YES
	· Cost was properly controlled	E12	0	5	0	NO
	· Quality was properly controlled	E13	5	0	0	YES
<b>Closing</b>	· Risk response was properly controlled	E14	5	0	0	YES
	· Contract close-out was done at end of project	C1	0	5	0	NO
	· Administrative Closure was done at end of project	C2	0	5	0	NO

## LIP 4

Project stages	Survey Options	Code	Number of Selections (out of 6 sources)			Result (Options selected by > 2 respondents)
	<b>PM Practices</b>		<b>Yes</b>	<b>No</b>	<b>Unaware</b>	<b>Mode</b>
<b>Initiation</b>	<b>Core:</b>					
	Expectations were clearly defined	I1	0	6	0	NO
	Scope and resource were estimated adequately	I2	6	0	0	YES
	Choice of project was justified	I3	5	1	0	YES

Planning						
	Feasibility study was conducted	I4	1	5	0	NO
	Core:					
	· Project scope was properly planned	P1	5	1	0	YES
	· Project scope was properly defined	P2	6	0	0	YES
	· Project activity was properly defined	P3	6	0	0	YES
	· Project activity sequencing was properly sequenced	P4	5	1	0	YES
	· Project resource planning was properly defined	P5	0	6	0	NO
	· Project activity duration was properly estimated	P6	6	0	0	YES
	· Project schedule development was properly defined	P7	6	0	0	YES
	· Project cost was properly estimated	P8	0	6	0	NO
	· Project cost budget was properly defined	P9	6	0	0	YES
	· Project plan development was clearly defined	P10	0	6	0	NO
	· Project quality planning was done properly	P11	0	6	0	NO
	· Project communications planning was done properly	P12	6	0	0	YES
	· Project risk were clearly identified	P13	0	6	0	NO
	· Project risk was clearly quantified	P14	0	6	0	NO
	· Project risk response was developed	P15	0	6	0	NO
	· Organisational Planning was done properly	P16	0	6	0	NO

	· Staff Acquisition was conducted on time where necessary	P17	6	0	0	YES
	· Procurement Planning was done properly	P18	0	6	0	NO
	· Solicitation Planning was properly done	P19	0	6	0	NO
<b>Executing and Controlling</b>	<b>Core:</b>					
	· Information was distributed often to all according to agreement	E1	0	6	0	NO
	· Team development activity took place	E2	6	0	0	YES
	· Quality assurance was properly conducted to plan	E3	1	5	0	NO
	· Scope was verified regularly	E4	5	1	0	YES
	· Solicitation was done when needed	E5	6	0	0	YES
	· Source selection was adequate	E6	6	0	0	YES
	· Contract administration was properly managed	E7	6	0	0	YES
	· Performance Reporting was according to plan	E8	2	4	0	NO
	· Overall Change Control was to plan	E9	6	0	0	YES
	<b>Facilitating:</b>					
	· Scope change was properly controlled	E10	6	0	0	YES
	· Schedule Control were in place and were applied	E11	6	0	0	YES
	· Cost was properly controlled	E12	6	0	0	YES
	· Quality was properly controlled	E13	6	0	0	YES
	· Risk response was properly controlled	E14	6	0	0	YES
<b>Closing</b>	· Contract close-out was done at end of project	C1	6	0	0	YES



	· Administrative Closure was done at end of project	C2	6	0	0	YES
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## LIP 5

Project stages	Survey Options	Code	Number of Selections (out of 6 sources)			Result (Options selected by > 2 respondents)
	PM Practices		Yes	No	Unaware	Mode
Initiation	<b>Core:</b>					
	Expectations were clearly defined	I1	6	0		YES
	Scope and resource were estimated adequately	I2	6	0		YES
	Choice of project was justified	I3	6	0		YES
	Feasibility study was conducted	I4	6	0		YES
Planning	<b>Core:</b>					
	· Project scope was properly planned	P1	6	0		YES
	· Project scope was properly defined	P2	6	0		YES
	· Project activity was properly defined	P3	6	0		YES
	· Project activity sequencing was properly sequenced	P4	6	0		YES
	· Project resource planning was properly defined	P5	6	0		YES
	· Project activity duration was properly estimated	P6	6	0		YES
	· Project schedule development was properly defined	P7	6	0		YES
	· Project cost was properly estimated	P8	6	0		YES

	· Project cost budget was properly defined	P9	6	0		YES
	· Project plan development was clearly defined	P10	6	0		YES
	· Project quality planning was done properly	P11	6	0		YES
	· Project communications planning was done properly	P12	6	0		YES
	· Project risk were clearly identified	P13	6	0		YES
	· Project risk was clearly quantified	P14	6	0		YES
	· Project risk response was developed	P15	6	0		YES
	· Organisational Planning was done properly	P16	6	0		YES
	· Staff Acquisition was conducted on time where necessary	P17	6	0		YES
	· Procurement Planning was done properly	P18	6	0		YES
	· Solicitation Planning was properly done	P19	6	0		YES
<b>Executing and Controlling</b>	<b>Core:</b>					
	· Information was distributed often to all according to agreement	E1	6	0		YES
	· Team development activity took place	E2	6	0		YES
	· Quality assurance was properly conducted to plan	E3	6	0		YES
	· Scope was verified regularly	E4	6	0		YES
	· Solicitation was done when needed	E5	6	0		YES
	· Source selection was adequate	E6	6	0		YES

	· Contract administration was properly managed	E7	6	0		YES
	· Performance Reporting was according to plan	E8	6	0		YES
	· Overall Change Control was to plan	E9	6	0		YES
	<b>Facilitating:</b>					
	· Scope change was properly controlled	E10	6	0		YES
	· Schedule Control were in place and were applied	E11	6	0		YES
	· Cost was properly controlled	E12	6	0		YES
	· Quality was properly controlled	E13	6	0		YES
	· Risk response was properly controlled	E14	6	0		YES
<b>Closing</b>	· Contract close-out was done at end of project	C1	6	0		YES
	· Administrative Closure was done at end of project	C2	6	0		YES

## LIP 6

Project stages	Survey Options	Code	Number of Selections (out of 6 sources)			Result (Options selected by > 2 respondents)
	<b>PM Practices</b>		<b>Yes</b>	<b>No</b>	<b>Unaware</b>	<b>Mode</b>
<b>Initiation</b>	<b>Core:</b>					
	Expectations were clearly defined	I1	6	0	0	YES
	Scope and resource were estimated adequately	I2	0	6	0	NO
	Choice of project was justified	I3	1	5	0	NO
	Feasibility study was conducted	I4	1	5	0	NO
<b>Planning</b>	<b>Core:</b>					

	· Project scope was properly planned	P1	6	0	0	YES
	· Project scope was properly defined	P2	1	5	0	NO
	· Project activity was properly defined	P3	6	0	0	YES
	· Project activity sequencing was properly sequenced	P4	6	0	0	YES
	· Project resource planning was properly defined	P5	6	0	0	YES
	· Project activity duration was properly estimated	P6	1	5	0	NO
	· Project schedule development was properly defined	P7	5	1	0	NO
	· Project cost was properly estimated	P8	6	0	0	YES
	· Project cost budget was properly defined	P9	6	0	0	YES
	· Project plan development was clearly defined	P10	6	0	0	YES
	· Project quality planning was done properly	P11	6	0	0	YES
	· Project communications planning was done properly	P12	6	0	0	YES
	· Project risk were clearly identified	P13	6	0	0	YES
	· Project risk was clearly quantified	P14	0	6	0	NO
	· Project risk response was developed	P15	6	0	0	YES
	· Organisational Planning was done properly	P16	0	6	0	NO
	· Staff Acquisition was conducted on time where necessary	P17	6	0	0	YES

	· Procurement Planning was done properly	P18	0	6	0	NO
	· Solicitation Planning was properly done	P19	6	0	0	YES
<b>Executing and Controlling</b>						
	· Information was distributed often to all according to agreement	E1	0	6	0	NO
	· Team development activity took place	E2	0	6	0	NO
	· Quality assurance was properly conducted to plan	E3	0	6	0	NO
	· Scope was verified regularly	E4	4	2	0	YES
	· Solicitation was done when needed	E5	5	1	0	YES
	· Source selection was adequate	E6	6	0	0	YES
	· Contract administration was properly managed	E7	6	0	0	YES
	· Performance Reporting was according to plan	E8	0	6	0	NO
	· Overall Change Control was to plan	E9	0	6	0	NO
	<b>Facilitating:</b>					
	· Scope change was properly controlled	E10	6	0	0	YES
	· Schedule Control were in place and were applied	E11	6	0	0	YES
	· Cost was properly controlled	E12	6	0	0	YES
	· Quality was properly controlled	E13	6	0	0	YES
	· Risk response was properly controlled	E14	6	0	0	YES
<b>Closing</b>	· Contract close-out was done at end of project	C1	6	0	0	YES
	· Administrative Closure was done at end of project	C2	6	0	0	YES

